COUNTY OF SANTA FE

ANTONIO LANE
SANITARY SEWER DESIGN
VILLAGE OF AGUA FRIA
SANTA FE COUNTY, NEW MEXICO
AUGUST 2019

SHEET INDEX

VICINITY MAP
N.T.S.

PROJECT DESCRIPTION

CONSTRUCTION OF 543 LINEAR FEET OF 10" "SDR26" GRAVITY SANITARY SEWER LINE, CONSTRUCTION OF 147 LINEAR FEET OF 10" PVC C-900 SEWER LINE, 7 SANITARY SEWER MANHOLES, 9 GRAVITY SEWER CONNECTION STUBOUTS, 630 LINEAR FEET OF 2" LOW PRESSURE SEWER LINE AND 4 LOW PRESSURE SEWER LINE CONNECTION STUBOUTS, ALL WITH APPURTENANCES. CONSTRUCTION OF 1305 LINEAR FEET OF 8" PVC C-900 WATER LINE WITH APPURTENANCES. WORK WILL BE WITHIN ANTONIO LANE IN THE VILLAGE OF AGUA FRIA, COUNTY OF SANTA FE, NEW MEXICO.

UTILITY CONTACTS

CITY OF SANTA FE WASTEWATER TREATMENT DEPARTMENT:
STAN HOLLAND; TELEPHONE (505) 955-4637

VILLAGE OF AGUA FRIA COMMUNITY WATER ASSOCIATION
RAMON ROMERO; TELEPHONE (505) 204-2394

NEW MEXICO GAS COMPANY:
MARK LERMA; TELEPHONE (505) 473-7244

TRAFFIC CONTROL NOTE

CONTRACTOR IS RESPONSIBLE FOR PREPARATION OF TRAFFIC CONTROL PLAN FOR SEQUENCING AND CONTRUCTION OF THIS PROJECT, SUBJECT TO SANTA FE COUNTY PROJECT MANAGER APPROVAL PRIOR TO COMMENCEMENT

REVIEWED AND APPROVED:

SANTA FE COUNTY UTILITIES DIRECTOR — DATE

SANTA FE COUNTY PUBLIC WORKS DIRECTOR — DATE

SANTA FE COUNTY LAND USE — DATE

CITY OF SANTA FE WASTEWATER DEPARTMENT — DATE

MORRIS
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PROJECT: SANTA FE COUNTY
ANTONIO LANE SANITARY SEWER DESIGN

SHEET TITLE: COVER SHEET/VICINITY MAP/INDEX

No.	REVISION	BY	APPVD.	DATE

PROJECT: ANTONIO LANE SEWER LINE
FILE NAME: 17303
DATE: 8/9/2019
SCALE: N.T.S.
DESIGN: R.A.M.
CHECKED: R.A.M.
DRAWN: J.P.S.

SHEET No.
1.0

GENERAL NOTES

1. CONTRACTOR SHALL DISPOSE OF ALL EXCAVATED DIRT FROM CONSTRUCTION SITE WHICH IS NOT REQUIRED FOR REUSE UNDER THIS CONTRACT. NO SEPARATE PAYMENT WILL BE MADE FOR ANY HAULING OR DISPOSAL OF MATERIALS. THE TRANSPORTATION AND/OR DISPOSAL OF MATERIALS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM TO WHICH THE WORK PERTAINS.

2. THE CONTRACTOR IS RESPONSIBLE FOR THE REMOVAL AND DISPOSAL OF ALL DEMOLITION DEBRIS. WORK MATERIALS SHALL BE DISPOSED OF IN THE CAJA DEL RIO LANDFILL, SECURED BY AND AT THE EXPENSE OF THE CONTRACTOR.

3. REINFORCED CONCRETE STRUCTURES SHALL HAVE REINFORCING STEEL CONTINUOUS AT ALL CORNERS.

4. CONTRACTOR SHALL ALLOW ACCESS TO THE CONSTRUCTION SITE BY THE ENGINEER, INSPECTOR, CITY AND COUNTY OF SANTA FE, AND N.M.E.D. PERSONNEL FOR OBSERVATION OF THE WORK AS IT PROGRESSES FOR WORK PERFORMED UNDER THIS CONTRACT AT ALL TIMES.

5. CONTRACTOR SHALL PROVIDE TEMPORARY WATER SERVICE LINES TO PROPERTIES WHEN WATER SERVICE IS INTERRUPTED FOR MORE THAN EIGHT (8) HOURS. PROPERTIES SHALL NOT BE WITHOUT WATER SERVICE OVERNIGHT. TEMPORARY WATER SERVICE SHALL BE CONSIDERED INCIDENTAL TO THIS PROJECT AND NO SEPARATE PAYMENT SHALL BE MADE THEREFOR.

6. THE CONTRACTOR SHALL HAND DELIVER SPECIAL NOTICES TO EACH LAND OWNER ADJACENT TO THE CONSTRUCTION AREA AND TO OTHERS WHO MAY BE AFFECTED BY THE CONSTRUCTION ACTIVITIES. NOTICES SHALL PROVIDE INFORMATION WHENEVER ACCESS, UTILITY SERVICES OR OTHER SERVICES TO PROPERTIES MAY BE IMPAIRED.

7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR:

- DELIVERY OF SPECIAL NOTICES NOT MORE THAN SEVEN (7) DAYS NOR LESS THAN FOUR (4) DAYS PRIOR TO PHYSICAL CONSTRUCTION THAT WILL AFFECT THE PROPERTY.
- DELIVER CORRECTED NOTICES IF CONSTRUCTION DOES NOT START WITHIN 48 HOURS OF THE DATE GIVEN ON THE NOTICE.
- THE WRITTEN NOTICES SHALL STATE:
  - CONTRACTOR'S NAME, ADDRESS AND LOCAL TELEPHONE NUMBER.
  - NATURE OF WORK TO BE DONE.
  - TYPE OF DISRUPTION TO EXPECT.
  - EXPECTED DURATION OF CONSTRUCTION AND START DATE.
  - CONTRACTOR'S LOCAL PHONE NUMBER WHERE EMERGENCY CONDITIONS CAN BE REPORTED DURING NORMAL WORKING HOURS.
  - CONTRACTOR'S LOCAL PHONE WHERE EMERGENCY CONDITIONS CAN BE REPORTED DURING NON-WORKING HOURS.

8. CONTRACTOR SHALL PROVIDE ACCESS TO PROPERTIES WITHIN THE PROJECT AREA DURING CONSTRUCTION.

9. IT IS THE CONTRACTOR'S RESPONSIBILITY TO KNOW AND COMPLY WITH THE "OCCUPATIONAL SAFETY AND HEALTH (OSHA) ACT OF 1970", AS AMENDED.

10. ALL EXCAVATION SHALL BE GOVERNED BY FEDERAL, STATE AND LOCAL LAWS, RULES AND REGULATIONS CONCERNING CONSTRUCTION SAFETY AND HEALTH, OSHA 29 CFR 1926.650. ALL EXCAVATION, TRENCHING AND SHORING ACTIVITIES MUST BE CARRIED OUT IN ACCORDANCE WITH OSHA 29 CFR 1926.650.

11. THE CONTRACTOR WILL BE RESPONSIBLE TO REPLACE AT HIS OWN EXPENSE ANY AND ALL PROPERTY CORNERS, PLSS MONUMENTS, AND OTHER SURVEY MONUMENTS DESTROYED IN THE PROCESS OF CONSTRUCTION. ALL SURVEY MONUMENTS MUST BE SET BY A REGISTERED PROFESSIONAL SURVEYOR. EVERY EFFORT SHALL BE MADE TO PRESERVE EXISTING MONUMENTS IN PLACE.

12. CONSTRUCTION EQUIPMENT & MATERIAL STORAGE: THE CONTRACTOR SHALL NOT STORE EQUIPMENT OR MATERIAL WITHIN 30 FEET FROM THE EDGE OF THE DRIVING LANE UNLESS THE EQUIPMENT OR MATERIAL IS PROPERLY SHIELDED UTILIZING CURRENT SAFETY DESIGN AND INSTALLATION METHODS. THE SAFETY DESIGN FOR SHIELDING SHALL BE PROVIDED BY THE CONTRACTOR AND MUST BE APPROVED BY THE PROJECT MANAGER BEFORE IMPLEMENTING. THE WORK, INCLUDING DESIGN, INSTALLATION AND REMOVAL OF THE SHIELDING, SHALL BE CONSIDERED INCIDENTAL TO THE COMPLETION OF THE PROJECT AND NO SEPARATE MEASUREMENT OR PAYMENT WILL BE MADE THEREFOR.

13. REMOVALS: THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL REMOVALS REQUIRED TO COMPLETE THE PROJECT. REMOVAL OF EXISTING ASPHALT OR CONCRETE PAVING SHALL BE FACILITATED BY A NEAT SAWCUT LINE. SUBGRADE AND WEARING COARSE SHALL BE REPLACED WITH EQUAL THICKNESS AND TYPE. SUBGRADE COMPACTION OF 95% MAX DENSITY SHALL BE ACHIEVED.

14. THE CONTRACTOR SHALL ASSUME RESPONSIBILITY FOR ANY DAMAGE TO EXISTING PAVEMENT OR CURB AND GUTTER DURING CONSTRUCTION. APART FROM THOSE SECTIONS INDICATED FOR REMOVAL ON THE PLANS AND SHALL REPAIR OR REPLACE SAME AT HIS OWN EXPENSE.

15. WHEN CONSTRUCTION UNDER THIS PROJECT CONNECTS TO EXISTING IMPROVEMENTS, THE CONTRACTOR SHALL PROVIDE A SMOOTH RIDING CONNECTION.

16. ALL WATER VALVE BOXES IN THE CONSTRUCTION AREA ARE TO BE ADJUSTED TO MATCH NEW FINISH GRADE UNDER THIS CONTRACT.

17. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING INTERIM DRAINAGE DURING CONSTRUCTION TO CONTROL STORM WATER NUISANCE FLOWS. CONTRACTOR SHALL BE REQUIRED TO REMOVE WATER AFTER ANY SIGNIFICANT PONDING THAT DEVELOPS AFTER A RAINSTORM BY PUMPING OR BY OTHER MEANS OR MEASURES.

18. CONTRACTOR SHALL PROVIDE WHATEVER MEANS NECESSARY TO PROTECT EXISTING STRUCTURES THAT MAY BE AFFECTED BY CONSTRUCTION. ANY DAMAGE TO EXISTING STRUCTURES SHALL BE PROMPTLY REPAIRED AT THE CONTRACTOR'S EXPENSE. CONTRACTOR SHALL RESTRICT USE OF VIBRATORY COMPACTION EQUIPMENT WITHIN THE VICINITY OF EXISTING STRUCTURES THAT COULD BE SUBJECT TO DAMAGE.

19. CONTRACTOR SHALL COORDINATE WITH THE APPLICABLE PUBLIC WATER AGENCY (SANTA FE COUNTY WATER) OR AGUA FRIA MDWCA SEVEN (7) WORKING DAYS IN ADVANCE OF ANY WORK THAT MAY AFFECT EXISTING PUBLIC WATER UTILITIES. EXISTING VALVES TO BE OPERATED BY UTILITY PERSONNEL ONLY.

20. MATCH ALL NEW PAVING ELEVATIONS AT EXISTING, ABUTTING AREAS. WHEN ABUTTING NEW PAVEMENT TO EXISTING, SAW CUT EXISTING PAVEMENT TO A NEAT STRAIGHT LINE AS REQUIRED TO REMOVE ANY BROKEN OR CRACKED PAVEMENT AND MATCH NEW TO EXISTING. TACK COAT SHALL BE APPLIED TO EDGES OF EXISTING PAVEMENT PRIOR TO BEGINNING NEW PAVEMENT OPERATIONS. SUCH WORK SHALL BE CONSIDERED INCIDENTAL TO CONSTRUCTION OF THE PROJECT.

21. THE CONTRACTOR SHALL BE REQUIRED TO CONFINE HIS WORK WITHIN THE CONSTRUCTION LIMITS, EASEMENTS AND/OR ROW TO PRESERVE EXISTING VEGETATION AND PRIVATE PROPERTY. OVERNIGHT PARKING OF CONSTRUCTION EQUIPMENT SHALL NOT OBSTRUCT DRIVEWAY OPENINGS. REASONABLE ACCESS TO ALL PROPERTIES SHALL BE MAINTAINED AT ALL TIMES, AND REASONABLE ARRANGEMENT FOR ACCESS SHALL BE COORDINATED WITH PRORERTY OWNERS WHEN CONSTRUCTION IS BEING PERFORMED DIRECTLY IN FRONT OF THEIR PROPERTIES.

22. THE CONTRACTOR SHALL MEET WITH APPLICABLE REPRESENTATIVES OF PRIVATE UTILITY COMPANIES, INCLUDING THE ELECTRIC COMPANY, TELEPHONE COMPANY, AND CABLE TELEVISION COMPANY PRIOR TO BEGINNING CONSTRUCTION TO DETERMINE WHERE CONFLICTS WITH THEIR FACILITIES EXIST. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROTECT THESE FACILITIES DURING CONSTRUCTION OPERATIONS OF THIS PROJECT AND MAINTAIN THEIR SERVICES. WATER UTILITIES HAVE BEEN COMPILED FROM THE RECORDS OF THE OWNERS OF THE UTILITIES AND LOCATIONS PROVIDED DURING THE DESIGN SURVEY. THE CONTRACTOR IS CAUTIONED THAT HE IS RESPONSIBLE FOR DETERMINING THE EXACT LOCATIONS OF AND PROVIDING PROTECTION FOR AND MAINTAINING IN OPERATION, ALL SUCH LINES DURING CONSTRUCTION. THE CONTRACTOR SHALL GIVE ALL PUBLIC UTILITY COMPANIES NOTICE IN WRITING, NO LESS THAN 48 HOURS, PRIOR TO ANY WORK THAT WOULD INTERFERE IN ANY WAY WHATSOEVER WITH THE SERVICE OF ANY EXISTING PUBLIC UTILITIES.

23. THE CONTRACTOR SHALL EMPLOY SHORING, SHEETING AND OTHER MEANS OF SUPPORT TO PREVENT DAMAGE OR LOSS OF ANY EXISTING UTILITIES. ANY DAMAGE TO EXISTING UTILITIES SHALL BE PROMPTLY REPAIRED AT THE CONTRACTOR'S EXPENSE. THE PROJECT MANAGER SHALL BE IMMEDIATELY NOTIFIED OF ANY SIGNIFICANT DEVIATION OF EXPOSED UTILITIES FROM THE LOCATIONS SHOWN ON THE PLANS SO THAT THE CONFLICTS MAY BE RESOLVED IN A TIMELY MANNER. NO DIRECT PAYMENT WILL BE MADE FOR SUPPORTING EXISTING UTILITIES DURING CONSTRUCTION. THIS WORK IS CONSIDERED INCIDENTAL.

24. PRIOR TO COMMENCING WORK IN A SPECIFIC AREA, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATIONS OF ALL OBSTRUCTIONS AND TIE IN PIPING. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE PROJECT MANAGER SO THAT THE CONFLICT MAY BE RESOLVED WITH A MINIMUM AMOUNT OF DELAY. THIS WORK SHALL BE CONSIDERED INCIDENTAL AND NO DIRECT PAYMENT SHALL BE MADE THEREFOR.

25. ALL POTHOLING FOR DETERMINATION OF UNDERGROUND UTILITIES SHALL BE CONSIDERED INCIDENTAL TO THIS CONTRACT.

26. THE CONTRACTOR SHALL COORDINATE ANY WORK REQUIRED BY OTHERS IN THE CONSTRUCTION AREA WITH THE CONSTRUCTION OF THIS PROJECT INCLUDING (BUT NOT LIMITED TO) OTHER CONTRACTORS AND UTILITY COMPANIES. IT MAY REQUIRE TO RESCHEDULE ACTIVITIES TO ALLOW UTILITY CREWS TO PERFORM THEIR REQUIRED WORK. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR DELAYS OR INCONVENIENCE CAUSED BY UTILITY COMPANY WORK CREWS.

27. PRIOR TO ANY EXCAVATION, THE CONTRACTOR MUST CONTACT NEW MEXICO ONE-CALL SYSTEM INC. (800-321-2537) FOUR (4) WORKING DAYS IN ADVANCE FOR LOCATION OF EXISTING UTILITIES.

28. THE CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL ABANDONED UTILITY LINES WHICH ARE EXPOSED AS A RESULT OF CONSTRUCTION UNLESS OTHERWISE DIRECTED. NO SEPARATE PAYMENT WILL BE MADE FOR SUCH REMOVAL AND SHALL BE CONSIDERED INCIDENTAL TO CONSTRUCTION OF THE PROJECT.

29. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ACQUIRING ALL PERMITS NECESSARY FOR CONSTRUCTION. PERMITS SHALL BE ACQUIRED PRIOR TO CONSTRUCTION.

30. MAINTENANCE OF AS-BUILT PLANS: THE CONTRACTOR SHALL MAINTAIN AN UP TO DATE SET OF AS-BUILT PLANS FOR THE PROJECT. THESE PLANS SHALL BE KEPT CURRENT, WITHIN TWO WEEKS, AT ALL TIMES AND SHALL BE SUBJECT TO REVIEW BY THE PROJECT MANAGER THROUGHOUT THE PROJECT AND WILL BE REVIEWED BY THE P.M. FOR ACCURACY AND COMPLETENESS AT LEAST ONCE EVERY 30 DAYS. THE FINAL AS-BUILT PLANS SHALL BE SUBMITTED TO THE PROJECT MANAGER PRIOR TO FINAL PAYMENT.

31. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING A TRAFFIC CONTROL PLAN FOR ANY WORK TO BE PERFORMED WITHIN OR ADJACENT TO EXISTING ROADWAYS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE TRAFFIC CONTROL PLAN PRIOR TO CONSTRUCTION, PROVIDING FLAGGERS, AND PROVIDING ALL OF THE NECESSARY TRAFFIC CONTROL DEVICES INCLUDING SIGNAGE, STRIPING, AND THE REMOVAL AND RESETTING OF THESE TRAFFIC CONTROL DEVICES.

32. NO EXCAVATION SHALL BE LEFT UNATTENDED BY CONTRACTOR PERSONNEL WHICH IS NOT COVERED COMPLETELY BY SHEETING OF APPROPRIATE STRENGTH FOR THE AREA AND CONDITIONS. A MAXIMUM OF 200 LF OF EXPOSED TRENCHING SHALL BE ALLOWED TO COMPLETE THE PROJECT.

33. CONSTRUCT ALL WORK DETAILED ON THESE PLANS, EXCEPT AS OTHERWISE STATED. IN ACCORDANCE WITH THE NEW MEXICO STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION - 2006 EDITION THROUGH THE LATEST REVISION (REFERRED TO HEREAFTER AS THE STANDARD SPECIFICATIONS) AND THE SANTA FE COUNTY WATER DIVISION CONSTRUCTION SPECIFICATIONS-LATEST EDITION.

34. REMOVAL OF TREES, SHRUBS AND VEGETATION WHERE NECESSARY TO INSTALL WATERLINES AND APPURTENANCES, IS CONSIDERED INCIDENTAL TO THE WORK AND NO SEPARATE PAYMENT WILL BE MADE.

35. PROTECT ALL LANDSCAPING, EXISTING WALLS, FENCES, STRUCTURES AND IMPROVEMENTS LOCATED WITHIN OR ADJACENT TO WORK AREAS, UNLESS OTHERWISE INDICATED IN PLANS, REPLACE ALL DISTURBED OR DAMAGED IMPROVEMENTS IN KIND, AT NO COST TO THE OWNER AND AS DIRECTED BY THE ENGINEER.

36. PLANS SHOW THE GENERAL LOCATION OF FENCES, WALLS, AND OTHER IMPROVEMENTS OR SURFACE FEATURES. CONTRACTOR IS RESPONSIBLE FOR VERIFYING AND PROTECTING EXISTING FEATURES WHICH MAY IMPACT CONSTRUCTION. COST FOR VERIFICATION AND PROTECTION ARE CONSIDERED INCIDENTAL TO THE WORK AND NO SEPARATE PAYMENT WILL BE MADE.

ENVIRONMENTAL NOTES

1. ALL DISTURBED AREAS WILL BE RETURNED TO PRE-CONSTRUCTION CONDITIONS. WHERE SEEDING IS REQUIRED CLASS H NATIVE SEED SHALL BE USED (REFER TO SECTION 632 OF NMDOT STANDARD SPECIFICATIONS 2007 EDITIONS).

2. THE TEMPORARY CONSTRUCTION-RELATED IMPACTS TO SURFACE WATER QUALITY WILL BE AVOIDED OR MINIMIZED BY COMPLYING WITH THE NPDES PERMIT REQUIREMENTS AND IMPLEMENTING A SWPPP. THE SWPPP WILL IDENTIFY MEASURES AND TECHNIQUES TO PREVENT SEDIMENT OF ARROYOS DURING STORM EVENTS.

3. AVOID GROUNDWATER CONTAMINATION THROUGH PROPER HANDLING AND STORAGE OF PETROLEUM PRODUCTS, CHEMICALS, TOXIC SUBSTANCES, AND HAZARDOUS MATERIALS.

4. CONSTRUCTION ACTIVITIES IN THE EPHEMERAL ARROYOS SHALL BE IN COMPLIANCE WITH THE USACE CLEAN WATER ACT PERMIT.

5. BEST MANAGEMENT PRACTICES (BMPS) SHALL BE UTILIZED DURING CONSTRUCTION TO REDUCE EROSION AND SURFACE WATER IMPACTS.

6. TO MINIMIZE FUGITIVE DUST, EXPOSED AND DISTURBED SOILS WILL BE WATERED AT A SUFFICIENT FREQUENCY, AND EARTH MOVING AND OTHER DUST-PRODUCING ACTIVITIES WILL BE SUSPENDED DURING PERIODS OF HIGH WINDS, WHEN DUST CONTROL EFFORTS ARE UNABLE TO PREVENT FUGITIVE DUST.

7. MEASURES TO REDUCE WIND EROSION MAY INCLUDE WETTING THE CONSTRUCTION SITE, LIMITING TRUCK SPEEDS ON DIRT ACCESS ROADS TO THE CONSTRUCTION SITE, COVERING LOADS, AND OTHER SUITABLE DUST SUPPRESSION TECHNIQUES.

8. REPLANT CURRENTLY VEGETATED AREAS THAT ARE DISTURBED WITH CERTIFIED WEED-FREE NATIVE VEGETATION. COORDINATE AREAS TO BE PLANTED WITH ENGINEER.

9. INSTALL AND BURY PIPE TRENCHES CONCURRENTLY TO REDUCE TRAPPING OF SMALL MAMMALS AND REPTILES.

10. IF BURIED CULTURAL DEPOSITS ARE DISCOVERED DURING PROJECT ACTIVITIES, THE CONTRACTOR WILL HALT WORK IN THE VICINITY OF THE SITE OF THE DISCOVERY AND IMMEDIATELY NOTIFY SANTA FE COUNTY WATER FOR CONSULTATION ON THE TREATMENT OF THE DISCOVERY. THE CONTRACTOR WILL NOT RESUME WORK IN THE AFFECTED AREA UNTIL CLEARANCE HAS BEEN RECEIVED.

11. CONSTRUCTION EQUIPMENT WILL TYPICALLY NOT OPERATE WITHIN 500 FEET OF A RESIDENTIAL ZONE BETWEEN HOURS OF 10 P.M. TO 7 A.M., BUT IF EXTENDING CONSTRUCTION HOURS ARE NEEDED. PRIOR APPROVAL WILL BE OBTAINED FROM SANTA FE COUNTY WATER.

12. DISTURBED AREAS WILL BE RESTORED TO PRE-CONSTRUCTION CONDITIONS.

13. SOILS AND ROCK EXCAVATED BUT NOT USED TO BACKFILL OR RESTORE CONTOUR WILL BE REMOVED FROM SITE.

14. IF CONSTRUCTION WORKERS ENCOUNTER CONTAMINATED SOIL OR WATER DURING CONSTRUCTION, WORK WILL STOP AT THE AFFECTED AREA, AND THE UTILITY OWNER WILL CONTACT AN ENVIRONMENTAL REMEDIATION CONTRACTOR TO ASSESS THE SITUATION AND DEVELOP A RESPONSE.

GENERAL NOTES CONTINUED

37. REMOVAL AND REPLACEMENT OF FENCES IS CONSIDERED INCIDENTAL TO THE WORK AND NO SEPARATE PAYMENT WILL BE MADE.

38. ANY CHANGES TO THESE PLANS MUST BE APPROVED BY SANTA FE COUNTY, CITY OF SANTA FE WASTEWATER DEPARTMENT & THE DESIGN ENGINEER. CONTRACTOR IS REQUIRED TO INSTALL LOCATED WIRE ON ALL INFRASTRUCTURE. WIRES TO BE TESTED FOR FUNCTIONALITY.

39. BY SFCU PRIOR TO FINAL ACCEPTANCE.

40. CONTRACTOR IS REQUIRED TO INSTALL CARSONITE MARKERS ALONG THE 10" SANITARY SEWER LINE OFFSET FROM MANHOLES.

41. CONTRACTOR IS REQUIRED TO INSTALL CONCRETE COLLARS ON ALL VALVES AND FIRE HYDRANTS IN ACCORDANCE WITH THE SANTA FE COUNTY DESIGN GUIDE AS SHOWN IN DETAIL ON SHEET 4.2 THE CONTRACTOR SHALL RECOGNIZE THAT WHEN WORKING IN THE PROJECT AREA, UTILITIES MAY NOT BE IN LOCATIONS SHOWN ON

42. THE DRAWINGS. LIKEWISE, THERE MAY BE UTILITIES IN LOCATIONS OTHER THAN THAT SHOWN ON THE DRAWINGS. THE CONTRACTOR IS REQUIRED TO PERFORM POTHOLING TO VERIFY EXISTING UTILITY LOCATIONS, WHETHER IDENTIFIED ON THE DRAWINGS OR NOT, PRIOR TO CONSTRUCTION AND ALSO REPAIR ANY DAMAGE TO EXISTING UTILITIES CAUSED BY CONTRACTOR. THIS WORK WILL BE CONSIDERED INCIDENTAL TO THE WORK.

43. ALL WATER UTILITY SHUTOFFS SHALL BE COORDINATED WITH THE APPROPRIATE UTILITY (AGUA FRIA MDWCA OR SANTA FE COUNTY WATER) AT LEAST SEVEN (7) WORKING DAYS PRIOR TO CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR THE REPAIR OF WATER SERVICES THAT ARE DAMAGED DURING CONSTRUCTION.

44. ACCEPTABLE TRENCH BEDDING CONDITIONS SHALL BE CLASS I, II, OR III GRANULAR MATERIAL PER APWA SECTION 701.13.3.2 AND TABLE 701.3.

45. PIPE MATERIAL FOR WATERLINE SHALL BE AWWA C-900 PVC DR18 UNLESS OTHERWISE NOTED ON P&P SHEETS.

46. INDENTIFY BACKFILL COMPACTION TESTING LOCATIONS ALONG NEW WATERLINES BY STATIONING.

47. DEVELOP AND SUBMIT FOR REVIEW A PRESSURE TESTING PLAN, INCLUDING SCHEDULE REQUIREMENTS, FOR FLUSHING, FILLING AND DISINFECTING COMPLETED PORTIONS OF THE WORK. REFER TO APWA 801 FOR SPECIFIC REQUIREMENTS.

48. PRIOR TO FILLING WATERLINES, COORDINATE WITH ENGINEER FOR FILLING RATES.

49. DURING HYDROSTATIC TEST, APPLY 150 PSI STATIC PRESSURE TO ALL NEW WATERLINES IN ACCORDANCE WITH APWA SECTION 801.

50. IDENTIFY LOCATIONS OF HYDROSTATIC TESTING SECTIONS IN THE MANNER DESCRIBED FOR COMPACTION TESTING.

51. ROCK EXCAVATION SHALL INCLUDE SAW CUTTING IN ADDITION TO DRILLING AND BLASTING.

52. MINIMUM COVER FOR WATERLINES IS 4 FEET.

53. WATER PIPE METALIZED WARNING TAPE SHALL BE BLUE AND DETECTABLE WHEN BURIED IN ACCORDANCE WITH APWA SECTION 801.9.9.

54. ALL CONNECTIONS TO EXISTING WATERLINES ARE "NON-PRESSURIZED" CONNECTIONS. CONTRACTOR TO CONFIRM SHUT-OFF VALVES WITH OWNER, EXERCISE VALVES ONLY WITH OWNER'S DIRECT APPROVAL, AND MINIMIZE CUSTOMER OUTAGE TIMES AND LENGTHS.

55. MONUMENTS, CONTROL POINTS, OR PROPERTY CORNER MARKINGS DISTURBED BY CONSTRUCTION SHALL BE RE-ESTABLISHED BY A NEW MEXICO LICENSED SURVEYOR AT A COST INCIDENTAL TO GENERAL CONSTRUCTION.

56. ALL WATERLINES AND YARD PIPING SHALL BE RESTRAINED PER SFC UTILITY STANDARD DETAIL 10A - JOINT RESTRAINT TABLE.

57. CONTRACTOR SHALL PROVIDE CONSTRUCTION STAKING UTILIZING THE APPROPRIATE RIGHT-OF-WAY MAPS, EASEMENTS, SIGNED PLATS, AND ACCEPTABLE STANDARD DRAWINGS.

58. CONTRACTOR SHALL SUBMIT VALVE TIES TO SANTA FE COUNTY WATER WITHIN 5 DAYS OF COMPLETION.

59. CONTRACTOR SHALL NOTIFY ALL PUBLIC EMERGENCY AGENCIES PRIOR TO ANY CLOSURE OF ANTONIO LANE TO ALLOW FOR ALTERNATE EMERGENCY ACCESS.

60. ALL MATERIALS SPECIFICATIONS ARE TO ADHERE TO THE SANTA FE COUNTY 2014 (OR LATER) DESIGN GUIDE STANDARDS FOR PUBLIC UTILITIES, WATER AND WASTEWATER (SECTION II.D).

61. CONTRACTOR IS REQUIRED TO INSTALL LOCATE WIRE ON ALL INFRASTRUCTURE. WIRE TO BE TESTED FOR FUNCTIONALITY BY SFCU PRIOR TO FINAL ACCEPTANCE.

62. CONTRACTOR IS REQUIRED TO INSTALL CARSONITE MARKERS ALONG EDGE OF ROAD, IN VICINITY OF MANHOLES, IN ACCORDANCE WITH THE SANTA FE COUNTY DESIGN GUIDE.

63. WORKMANSHIP AND MATERIALS SHALL CONFORM WITH THE NEW MEXICO STATE HIGHWAY AND TRANSPORTATION DEPARTMENT "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, 2019 EDITION," UNLESS OTHERWISE APPROVED IN WRITING BY THE ENGINEER.

SANTA FE COUNTY UTILITY WATERLINE CONSTRUCTION NOTES

1. ALL WATER LINE AND FITTING MATERIALS AND THEIR INSTALLATION SHALL COMPLY WITH THE AMERICAN WATERWORKS ASSOCIATION (AWWA) STANDARDS, THE NEW MEXICO STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, (NMAPWA) 2006 EDITION, OR SUBSEQUENT REVISIONS, AND THE SANTA FE COUNTY WATER UTILITY CONSTRUCTION STANDARD AND SPECIFICATIONS MANUAL, UNLESS OTHERWISE INDICATED ON THESE DRAWINGS. WHEN CONFLICT ARISES AMONG THESE, THE LATTER SHALL PREVAIL.

2. LOCATION OF LINES AND FITTINGS SHALL BE IN ACCORDANCE WITH THE DETAILS SHOWN ON THESE DRAWINGS.

3. UNLESS OTHERWISE INDICATED ON THESE DRAWINGS, PIPELINES AND ALL APPURTENANT FITTINGS SHALE BE PVC C-900, WITH CLASS-D BEDDING OR BETTER. MECHANICAL OR MEGALUG (R) JOINTS, OR THERMAL FUSION JOINING RESPECTIVELY (HDPE). EXCAVATION SHALL BE PROPERLY MADE TO ACCOMMODATE THE PIPE'S BELL ENDS AS NECESSARY. WATERLINES SHALL BE 8" DIAMETER OR

4. ALL WATER LINES SHALL BE INSTALLED IN THEIR OWN TRENCH, WITH NO OTHER UTILITIES IN THE TRENCH, BURIED UNDER A MINIMUM 48 INCHES OF COMPACTED BACKFILL.

5. WHEN CROSSING, WATER LINES SHALL ALWAYS BE ABOVE SEWER LINES, AND A MINIMUM 18-INCH CLEARANCE SHALL BE ALLOWED BETWEEN THE BOTTOM OF THE WATER LINE AND THE TOP OF ANY SANITARY SEWER, UNLESS SPECIAL CROSSING PROVISIONS ARE SHOWN ON THESE DRAWING.

6. TYPICAL HORIZONTAL SEPARATION BETWEEN WATER LINES AND ANY SANITARY SEWER LINE SHALL BE MINIMUM 10 FEET, AND SEPARATE TRENCHES SHALL BE EXCAVATED IN ALL CASES; UNLESS IN SPECIAL CONDITIONS SHOWN ON THESE PLANS.

7. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR DISINFECTION AND PRESSURE TESTING OF ALL NEW WATER LINES, IN ACCORDANCE WITH AWWA STANDARDS. COUNTY UTILITY PERSONNEL SHALL BE PRESENT DURING SUCH TESTING, AND AN INSPECTION REPORT SHALL BE SUBMITTED BY THE CONTRACTOR TO THE COUNTY UTILITIES PRIOR TO FINAL ACCEPTANCE OF THE PROJECT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH THE COUNTY UTILITY STAFF FOR THEIR PRESENCE DURING FIELD TESTING OF LINES. BACTERIA TEST RESULTS OVER 30 DAYS OLD, BY THE COMPLETION OF THE PROJECT SHALL BE RETESTED AT 0 ADDITIONAL EXPENSE TO THE OWNER.

8. ALL VALVES 12" DIAMETER OR SMALLER SHALL BE FULL-PORT GATE TYPE, RESILIENT SEATING, MECHANICAL OR MEGALUG (R) JOINTS, PIPE, AND INSTALLED IN COMPLIANCE WITH THE COUNTY WATER SYSTEM DETAILS.

9. UPON COMPLETION ONE VALVE SHALL BE TIED TO ONE OR MORE OF THE SANTA FE COUNTY'S PERMANENT SURVEY MONUMENTS, (OR OTHER VISIBLE WATER FEATURES OR FIXTURES) SUCH AS FIRE HYDRANTS AND WATER METERS WITH DISTANCES BETWEEN ALL FITTINGS AND APPURTENANCES PROVIDE AS REQUIRED IN THE UTILITY DEPARTMENTS CONSTRUCTION STANDARDS AND SPECIFICATIONS MANUAL. THE WORK SHALL BE PERFORMED BE A REGISTERED NEW MEXICO LICENSED SURVEYOR, OR ENGINEER WITH INFORMATION PROVIDED BY THE CONTRACTOR.

10. ALL FIRE HYDRANTS SHALL BE SUPPLIED WITH NFP CONNECTORS, AND NUMBERED (NUMBER SUPPLIED BY THE COUNTY FIRE DEPARTMENT). HYDRANTS SHALL BE INSTALLED TO ALLOW A MINIMUM HORIZONTAL CLEARANCE OF 3-FEET ALL AROUND THEM.

11. WATER SERVICE CONNECTIONS AND METERS SHALL BE 1-INCH MINIMUM DIAMETER FOR LOTS THAT WILL BE THE SITE FOR RESIDENTIAL BUILDINGS EQUIPPED WITH FIRE SUPPRESSION SYSTEMS. OTHERWISE, CONNECTIONS AND METERS SHALL BE STANDARD 5/8 INCH DIAMETER. METER SETTERS SHALL BE PER STANDARD REQUIRED IN SANTA FE COUNTY UTILITY DEPARTMENT'S CONSTRUCTION STANDARDS AND SPECIFICATIONS MANUAL. METERS SHALL BE NEPTUNE T-10 WITH E-CODE, R-9001 REGISTER AND RADIO TRANSMITTER.

12. LOCATE WIRES SHALL BE INSTALLED ON ALL WATER LINES. THE LOCATE WIRE MUST BE VISIBLE IN ALL VALVE VAULTS, MANHOLES OR OTHER ACCESS STRUCTURES. THIS WILL BE VERIFIED DURING THE PRELIMINARY INSPECTION PRIOR TO PAVING. THE LOCATE WIRE SHALL BE A CONTINUOUS, 12 GAUGE SOLID STRAND INSULATED COPPER WIRE. SPLICES OF THE LOCATE WIRE SHALL FOLLOW THE SPECIFICATIONS IN THE SANTA FE COUNTY UTILITY DEPARTMENT'S CONSTRUCTION STANDARDS AND SPECIFICATIONS MANUAL.

SANTA FE COUNTY UTILITY GENERAL NOTES

1. CONTRACTOR SHALL NOTIFY SANTA FE COUNTY (SFCU) UTILITIES FIVE (5) DAYS PRIOR TO COMMENCEMENT OF WORK.
2. CONSTRUCTION SHALL BE DONE IN ACCORDANCE WITH THE SFC UTILITIES CONSTRUCTION STANDARDS AND SPECIFICATIONS.
3. ALL EASEMENTS SHALL BE DEDICATED, CLEARED, GRADED AND STAKED PRIOR TO WATER LINE INSTALLATION.
4. ALL STREETS SHALL BE CUT TO WITHIN ±6" OF FINAL GRADE PRIOR TO WATER LINE INSTALLATION.
5. LOT CORNERS SHALL BE STAKED PRIOR TO SERVICE LINE INSTALLATION. CURB, GUTTER AND DRIVEWAY APRON SHALL BE INSTALLED PRIOR TO SERVICE LINE INSTALLATION UNLESS OTHERWISE APPROVED IN WRITING BY SFC UTILITIES.
6. CONTRACTOR (DEVELOPER) SHALL PROVIDE CONSTRUCTION STAKING BY A LICENSED NEW MEXICO SURVEYOR UTILIZING THE APPROPRIATE RIGHT-OF-WAY MAPS, SIGNED PLATS AND SFC UTILITIES DRAWINGS.
7. MATERIAL SUBMITTALS SHALL BE APPROVED BY SFC UTILITIES PRIOR TO CONSTRUCTION.
8. CONTACT NEW MEXICO ONE CALL AT 811 TWO (2) WORKING DAYS IN ADVANCE OF CONSTRUCTION FOR UTILITY LOCATES.
9. PRESSURE REGULATORS SHALL BE INSTALLED ON ALL SERVICE DOWNSTREAM FROM THE METER. EACH RESIDENTIAL SERVICE IS REQUIRED TO INSTALL A PRESSURE REDUCING VALVE (PRV), WATTS #U5 OR U5B IN TANDEM WITH THE METER OR IN ITS OWN VAULT BOX BETWEEN THE METER AND THE RESIDENCE BEFORE ANY USER SERVICE LINES.
10. A MINIMUM OF 4 FEET COVER TO TOP OF PIPE SHALL BE MAINTAINED ON ALL WATER MAINS AND SERVICES.
11. CONTRACTOR SHALL SUBMIT AS-BUILT CONSTRUCTION PACKET WITHIN FIVE (5) DAYS OF COMPLETION OF CONSTRUCTION INCLUDING: VALVE TIES, AS-BUILT DRAWINGS (INCLUDING, BUT NOT LIMITED TO: FITTING-TO-FITTING MEASUREMENTS, SERVICE-TO-SERVICE MEASUREMENTS, CENTER OF MAIN TO CENTER OF SERVICE MEASUREMENTS, LENGTH OF MAIN INSTALLED, FITTINGS INSTALLED, ETC.) POTABILITY AND PRESSURE TEST RESULTS.
12. ALL VALVE BOXES SHALL BE BROUGHT UP TO GRADE AFTER FIRST COURSE OF ASPHALT AND BEFORE FINAL COURSE OF ASPHALT.
13. FIRE HYDRANTS SHALL BE NUMBERED USING REFLECTIVE NUMERALS. THE REFLECTIVE NUMERALS SHALL BE APPLIED BY THE SANTA FE COUNTY FIRE DEPARTMENT AT THE COMPLETION OF THE PROJECT. NUMBERS SHALL BE LEGIBLE FROM THE ROAD. PRIOR TO INSTALLING NUMBERS, FIRE HYDRANTS SHALL BE PAINTED PER SPECIFICATIONS ON PAGE 7, SECTION 8.4.
14. A MECHANICAL RESTRAINT SYSTEM SHALL BE UTILIZED ON FITTINGS AND PIPING FOR THRUST RESTRAINT. CONCRETE THRUST BLOCKING SHALL BE USED ONLY FOR SPECIAL CONDITIONS (E.G CAPS WHERE MAIN WILL BE EXTENDED IN THE FUTURE) AS SPECIFICALLY APPROVED BY SFC UTILITIES.
15. ANY FIELD CHANGES TO THESE PLANS REQUIRE APPROVAL OF BOTH THE DESIGN ENGINEER AND SFC UTILITIES.
16. WORK ON SFC UTILITIES FACILITIES SHALL NOT BEGIN UNTIL SFC UTILITIES HAS ISSUED A NOTICE TO PROCEED TO THE APPROVED UTILITY CONTRACTOR.

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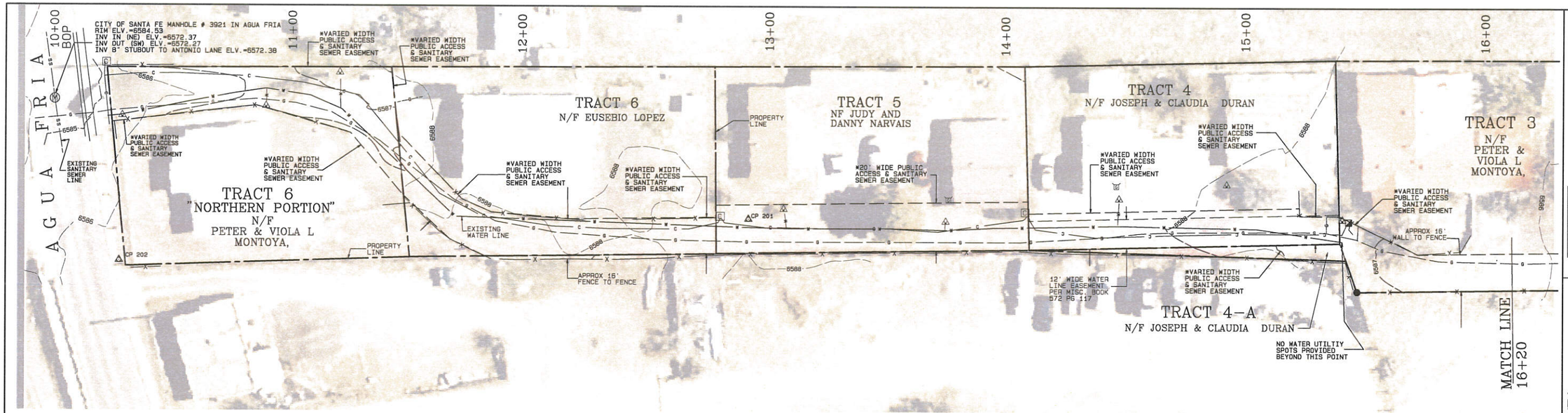
PROJECT
SANTA FE COUNTY
ANTONIO LANE SANITARY SEWER DESIGN

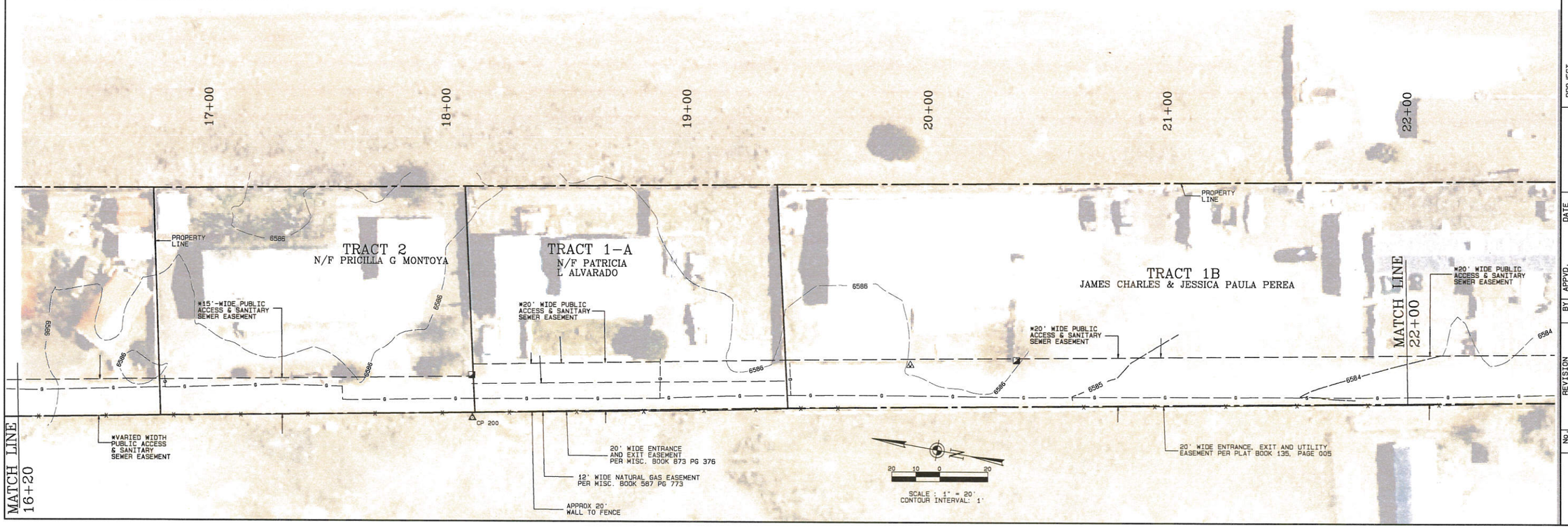
SHEET TITLE
GENERAL NOTES

No.	REVISION	BY	APPVD.	DATE

PROJECT: ANTONIO LANE SEWER LINE
FILE NAME: 17301
DATE: 8/9/2019
SCALE: N.T.S.
DESIGN: R.A.M.
CHECKED: R.A.M.
DRAWN: J.P.S.

SHEET No.
1.1





LEGEND

- CONTROL POINT; SEE SHEET 1.2
- EXISTING SANITARY SEWER MANHOLE
- PROPOSED MANHOLE
- EXISTING COMMUNICATIONS BOX
- EXISTING WATER METER
- EXISTING TELEPHONE PEDESTAL
- EXISTING GAS METER
- EXISTING FENCE LINE
- EXISTING GAS LINE
- EXISTING WATER LINE
- EXISTING UNDERGROUND COMMUNICATIONS LINE

GENERAL NOTES

1. PROJECT CENTERLINE IS COINCIDENT WITH NEW SEWER ALIGNMENT. ALL STATIONS GIVEN REFER TO SAID PROJECT CENTERLINE UNLESS OTHERWISE SPECIFIED.
2. CONTRACTOR TO VERIFY LOCATION OF EXISTING UTILITIES FOR CONNECTION WITH RELOCATED UTILITIES.
3. SPECIFIC WIDTH AND LOCATION OF ALL PUBLIC ACCESS AND UTILITY EASEMENTS IS SHOWN ON EXHIBITS GRANTING SAID EASEMENTS BY APPROPRIATE LAND OWNERS.
4. EXISTING UNDERGROUND UTILITIES SHOWN ARE BASED ON INFORMATION PROVIDED BY OTHERS.

20 10 0 20

SCALE : 1" = 20'
CONTOUR INTERVAL: 1'

* PUBLIC ACCESS & SANITARY SEWER EASEMENTS WITH ASTERISK * ARE TO BE GRANTED BY LAND OWNERS AS PART OF THIS PROJECT AND COORDINATED BY SANTA FE COUNTY PROJECT MANAGER.

PLAN

EXISTING CONDITIONS

CONTROL TABLE

CONTROL MONUMENT	N.M.S.P.C. 1983 (CENTRAL ZONE) NORTHING	EASTING	MODIFIED GROUND COORDINATES SCALED BY 1.000407546 AT 0,0 NORTHING	EASTING	ELEVATION NAVD 88	DESCRIPTION
CP200	1693783.81	1709443.82	1694474.10	1710140.50	6585.74	RBR W/ PLASTIC CAP "COBB FINDLEY"
CP201	1694289.64	1709382.45	1694980.14	1710079.10	6588.37	RBR W/ PLASTIC CAP "COBB FINDLEY"
CP202	1694544.55	1709318.89	1695235.15	1710015.52	6586.67	RBR W/ PLASTIC CAP "COBB FINDLEY"

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PROJECT: SANTA FE COUNTY ANTONIO LANE SANITARY SEWER DESIGN

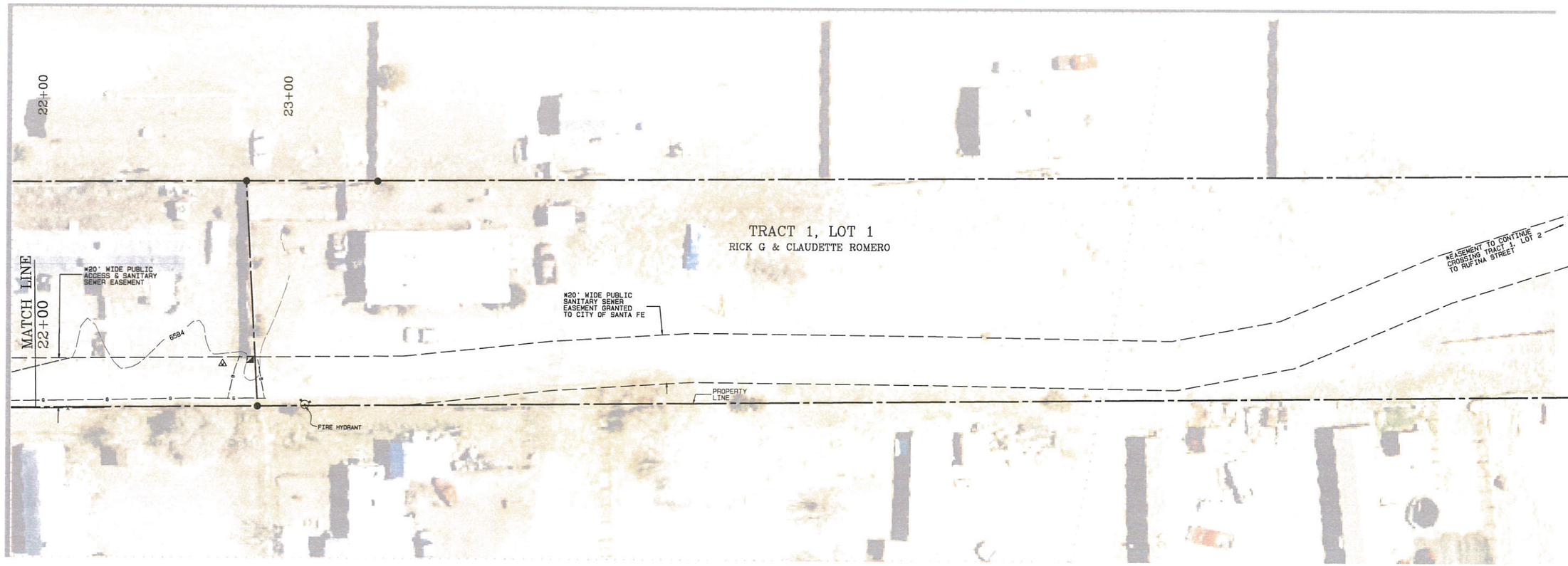
SHEET TITLE: EXISTING CONDITIONS

NO.	REVISION	BY	APPVD.	DATE

PROJECT:ANTONIO LANE SEWER LINE
FILE NAME:17301
DATE: 8/9/2019
SCALE: HOR 1"=20', VERT 1"=5', CONTOUR INTERVAL=1'

DESIGN: R.A.M.
CHECKED: R.A.M.
DRAWN: J.P.S.

SHEET No.
1.2



LEGEND

- CONTROL POINT; SEE SHEET 1.2
- EXISTING SANITARY SEWER MANHOLE
- PROPOSED MANHOLE
- EXISTING COMMUNICATIONS BOX
- EXISTING WATER METER
- EXISTING TELEPHONE PEDESTAL
- EXISTING GAS METER
- EXISTING FENCE LINE
- EXISTING GAS LINE
- EXISTING WATER LINE
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SCALE : 1" = 20'
CONTOUR INTERVAL: 1'

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PLAN

EXISTING CONDITIONS

CONTROL TABLE

CONTROL MONUMENT	N.M.S.P.C. 1983 (CENTRAL ZONE) NORTHING	EASTING	MODIFIED GROUND COORDINATES SCALED BY 1.000407546 AT 0,0 NORTHING	EASTING	ELEVATION NAVD 88	DESCRIPTION
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SANTA FE COUNTY

ANTONIO LANE SANITARY SEWER DESIGN

EXISTING CONDITIONS

PROJECT

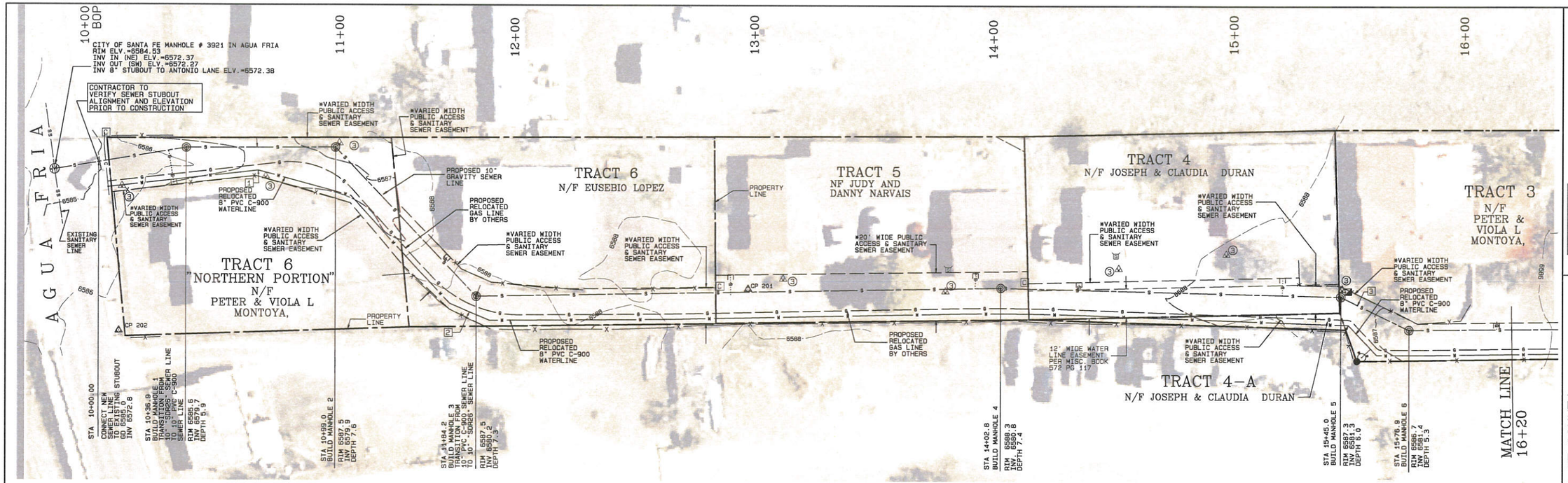
SHEET TITLE

No.	REVISION	BY	APPVD.	DATE

PROJECT: ANTONIO LANE SEWER LINE
FILE NAME: 17301
DATE: 8/9/2019
SCALE: HOR 1"=20', VERT 1"=5', CONTOUR INTERVAL=1'

DESIGN: R.A.M.
CHECKED: R.A.M.
DRAWN: J.P.S.

SHEET No.
1.3



LEGEND

- CONTROL POINT; SEE SHEET 1.2
- EXISTING SANITARY SEWER MANHOLE
- PROPOSED MANHOLE
- EXISTING COMMUNICATIONS BOX
- EXISTING WATER METER
- EXISTING TELEPHONE PEDESTAL
- EXISTING GAS METER
- KEYED NOTE REFERENCE
- EXISTING FENCE LINE
- PROPOSED RELOCATED GAS LINE BY OTHERS
- PROPOSED RELOCATED 8" WATER LINE
- PROPOSED SANITARY SEWER LINE
- PROPOSED LOW PRESSURE SEWER LINE
- PROPOSED SEWER LINE CONNECTION

GENERAL NOTES

1. PROJECT CENTERLINE IS COINCIDENT WITH NEW SEWER ALIGNMENT. ALL STATIONS GIVEN REFER TO SAID PROJECT CENTERLINE UNLESS OTHERWISE SPECIFIED.
2. WATER & GAS LINE LOCATIONS SHOWN ARE PER PROPOSED RELOCATED POSITIONS (SEE SHEETS 3.1 - 3.3)
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7. RESIDENTIAL SEWER SERVICE LINE STUBOUT LOCATIONS TO BE COORDINATED WITH COUNTY PROJECT MANAGER. STUBOUTS SHALL EXTEND TO EDGE OF EASEMENT, CAPPED AND MARKED. SEE DETAIL SHEETS 5.2 (GRAVITY) AND 5.5 (LOW PRESSURE)

KEYED NOTES (WATER/SEWER SEPARATION)

[1] SEPARATION BETWEEN GRAVITY SEWER (10" PVC C-900 SEWER LINE) AND WATERLINE (WITH WATERLINE ABOVE SEWER):
HORIZONTAL = 9.5'
VERTICAL = 0.4'

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[3] SEPARATION BETWEEN GRAVITY SEWER (SDR26 SEWER LINE) AND WATERLINE (WITH WATERLINE ABOVE SEWER):
HORIZONTAL =9.2'
VERTICAL = 0.1'

PLAN

GRAVITY AND LOW PRESSURE SEWER LINE

* PUBLIC ACCESS & SANITARY SEWER EASEMENTS WITH ASTERISK * ARE TO BE GRANTED BY LAND OWNERS AS PART OF THIS PROJECT AND COORDINATED BY SANTA FE COUNTY PROJECT MANAGER.

SCALE : 1" = 20'
CONTOUR INTERVAL: 1'

SEWER LINE LENGTHS

TYPE	LENGTH
10" "SDR26" GRAVITY SEWER LINE	543 LF
10" PVC C-900 SEWER LINE	147 LF
2" LOW PRESSURE SEWER LINE	630 LF

COORDINATE TABLE

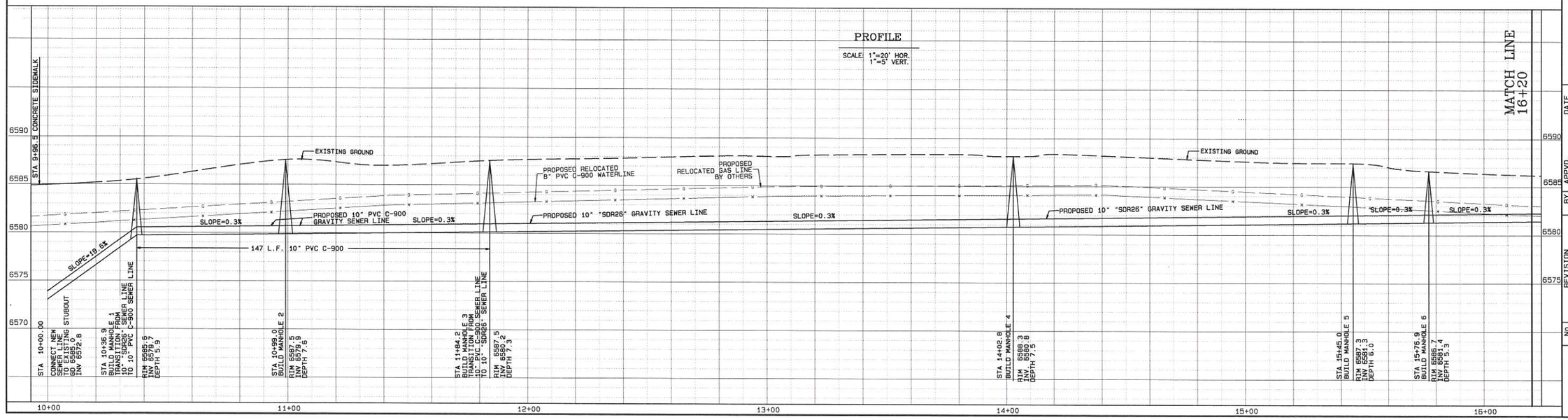
PROPOSED SEWERLINE/ PROJECT CENTERLINE

REFERENCE	STATION	NORTHING	EASTING
CONNECT TO 8" STUBOUT	STA 10+00.0	1694565.09	1709386.19
MANHOLE 1	STA 10+36.9	1694530.31	1709398.48
MANHOLE 2	STA 10+99.0	1694469.17	1709409.51
MANHOLE 3	STA 11+84.2	1694400.45	1709359.34
MANHOLE 4	STA 14+02.8	1694185.95	1709401.54
MANHOLE 5	STA 15+45.0	1694045.38	1709423.14
MANHOLE 6	STA 15+76.9	1694014.65	1709414.73
MANHOLE 7	STA 16+90.0	1693903.45	1709435.47
TERMINAL FLUSHING CONNECTION	STA 23+20.0	1693284.56	1709553.60

FOR WATERLINE DESIGN COORDINATES SEE SHEETS 3.1-3.3

PROFILE

SCALE: 1"=20' HOR.
1"=5' VERT.



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SANTA FE COUNTY
ANTONIO LANE SANITARY SEWER DESIGN

GRAVITY SEWER DESIGN
STA 10+00 TO STA 16+20

PROJECT

SHEET TITLE

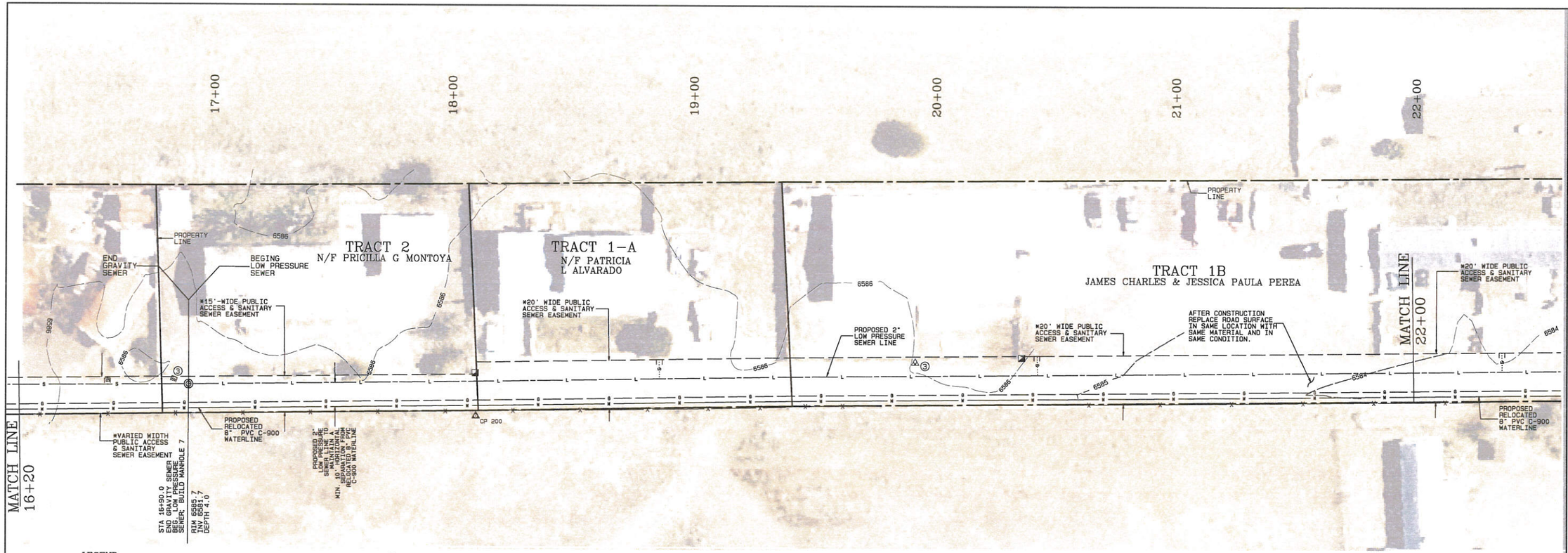
No.	REVISION	BY	APPVD.	DATE

PROJECT: ANTONIO LANE SEWER LINE
FILE NAME: 17301
DATE: 8/9/2019
SCALE: HOR 1"=20', VERT 1"=5', CONTOUR INTERVAL=1'

DESIGN: R.A.M.
CHECKED: R.A.M.
DRAWN: J.P.S.

THIS DRAWING FOR ANY OTHER PROJECT

SHEET No.
2.1



LEGEND

- CONTROL POINT; SEE SHEET 1.2
- EXISTING SANITARY SEWER MANHOLE
- PROPOSED MANHOLE
- EXISTING COMMUNICATIONS BOX
- EXISTING WATER METER
- EXISTING TELEPHONE PEDESTAL
- EXISTING GAS METER
- KEYED NOTE REFERENCE
- EXISTING FENCE LINE
- PROPOSED RELOCATED GAS LINE BY OTHERS
- PROPOSED RELOCATED 8" WATER LINE
- PROPOSED SANITARY SEWER LINE
- PROPOSED LOW PRESSURE SEWER LINE
- PROPOSED SEWER LINE CONNECTION

GENERAL NOTES

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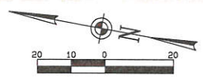
KEYED NOTES (WATER/SEWER SEPARATION)

1. SEPARATION BETWEEN GRAVITY SEWER (10" PVC C-900 SEWER LINE) AND WATERLINE (WITH WATERLINE ABOVE SEWER): HORIZONTAL = 9.5' VERTICAL = 0.4'
2. SEPARATION BETWEEN GRAVITY SEWER (10" PVC C-900 SEWER LINE) AND WATERLINE (WITH WATERLINE ABOVE SEWER): HORIZONTAL = 7.0' VERTICAL = 1.4'
3. SEPARATION BETWEEN GRAVITY SEWER (SDR26 SEWER LINE) AND WATERLINE (WITH WATERLINE ABOVE SEWER): HORIZONTAL =9.2' VERTICAL = 0.1'

PLAN

GRAVITY AND LOW PRESSURE SEWER LINE

* PUBLIC ACCESS & SANITARY SEWER EASEMENTS WITH ASTERISK * ARE TO BE GRANTED BY LAND OWNERS AS PART OF THIS PROJECT AND COORDINATED BY SANTA FE COUNTY PROJECT MANAGER.



SCALE : 1" = 20'
CONTOUR INTERVAL: 1'

SEWER LINE LENGTHS

TYPE	LENGTH
10" "SDR26" GRAVITY SEWER LINE	543 LF
10" PVC C-900 SEWER LINE	147 LF
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COORDINATE TABLE

PROPOSED SEWERLINE/ PROJECT CENTERLINE

REFERENCE	STATION	NORTHING	EASTING
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MANHOLE 7	STA 16+90.0	1693903.45	1709435.47
TERMINAL FLUSHING CONNECTION	STA 23+20.0	1693284.56	1709553.60

FOR WATERLINE DESIGN COORDINATES SEE SHEETS 3.1-3.3

PROFILE

SCALE: 1"=20' HOR.
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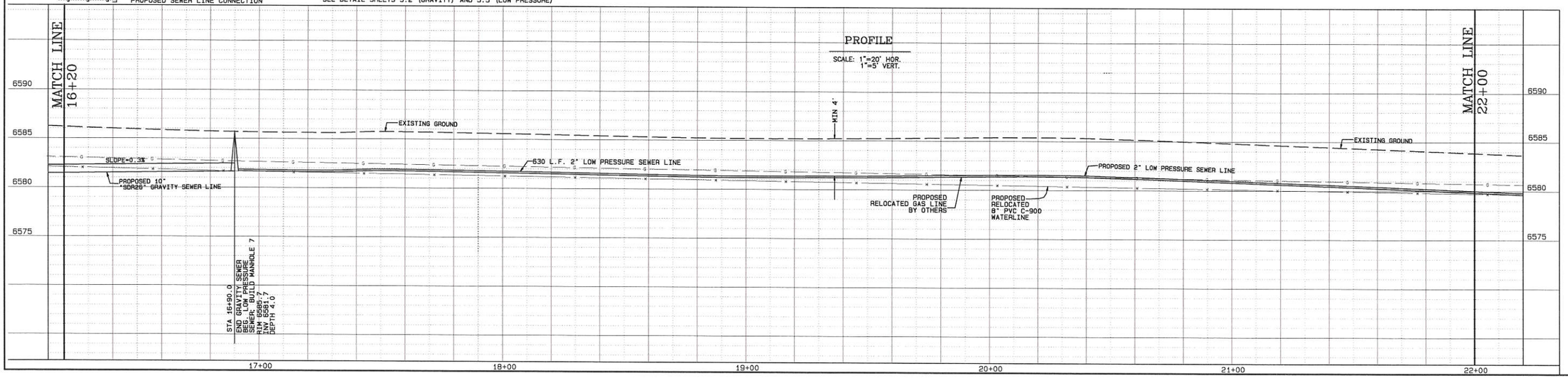

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PROJECT
SANTA FE COUNTY
ANTONIO LANE SANITARY SEWER DESIGN

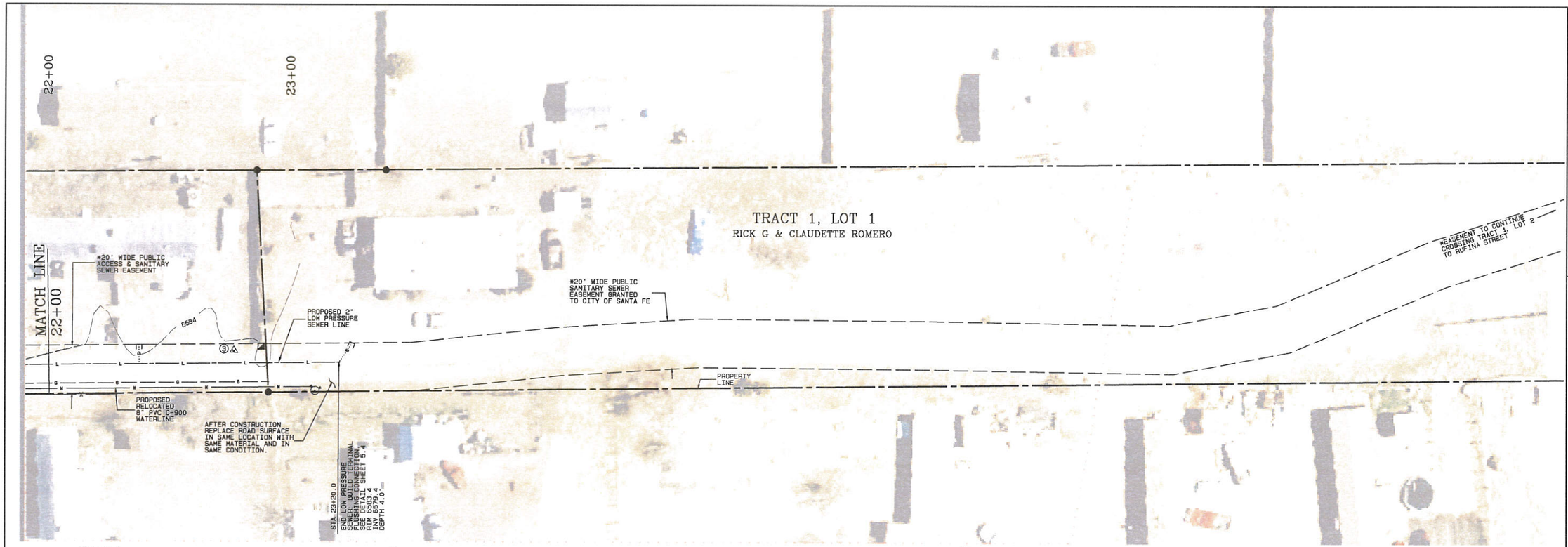
SHEET TITLE
GRAVITY AND LOW PRESSURE SEWER DESIGN
STA 16+20 TO STA 22+00

NO.	REVISION	BY	APPVD.	DATE

PROJECT: ANTONIO LANE SEWER LINE
FILE NAME: 17301
DATE: 8/9/2019
SCALE: HOR 1"=20', VERT 1"=5', CONTOUR INTERVAL=1'

DESIGN: R.A.M.
CHECKED: R.A.M.
DRAWN: J.P.S.

SHEET No.
2.2



LEGEND

- CONTROL POINT; SEE SHEET 1.2
- EXISTING SANITARY SEWER MANHOLE
- PROPOSED MANHOLE
- EXISTING COMMUNICATIONS BOX
- EXISTING WATER METER
- EXISTING TELEPHONE PEDESTAL
- EXISTING GAS METER
- KEYED NOTE REFERENCE
- EXISTING FENCE LINE
- PROPOSED RELOCATED GAS LINE BY OTHERS
- PROPOSED RELOCATED 8" WATER LINE
- PROPOSED SANITARY SEWER LINE
- PROPOSED LOW PRESSURE SEWER LINE
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GENERAL NOTES

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PLAN

GRAVITY AND LOW PRESSURE SEWER LINE

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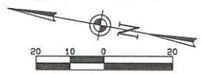

SCALE : 1" = 20'
CONTOUR INTERVAL: 1'

SEWER LINE LENGTHS

TYPE	LENGTH
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10" PVC C-900 SEWER LINE	147 LF
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COORDINATE TABLE

PROPOSED SEWERLINE/ PROJECT CENTERLINE

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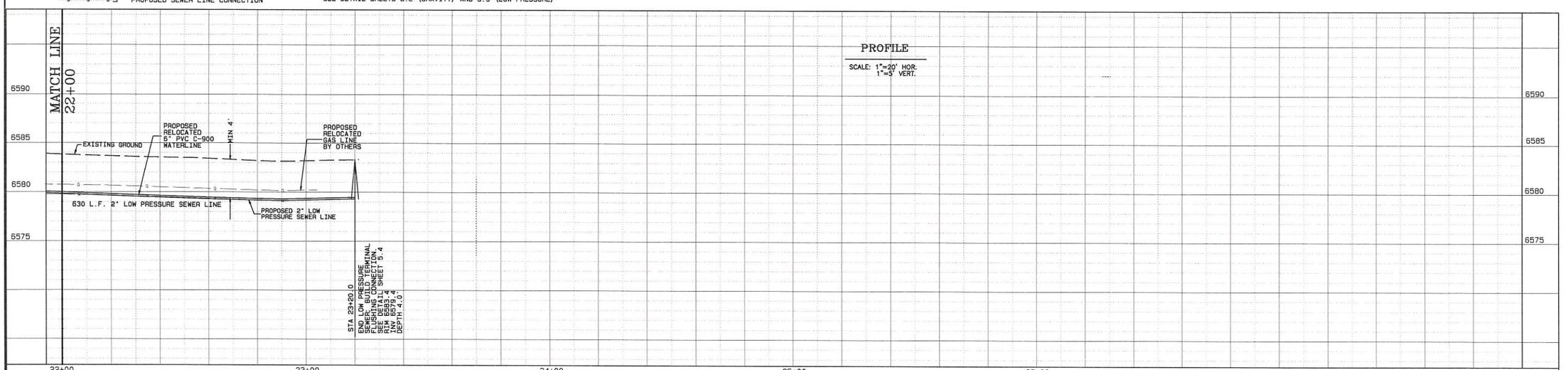
FOR WATERLINE DESIGN COORDINATES SEE SHEETS 3.1-3.3

PROFILE

SCALE: 1"=20' HOR.
1"=5' VERT.



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PROJECT
SANTA FE COUNTY
ANTONIO LANE SANITARY SEWER DESIGN

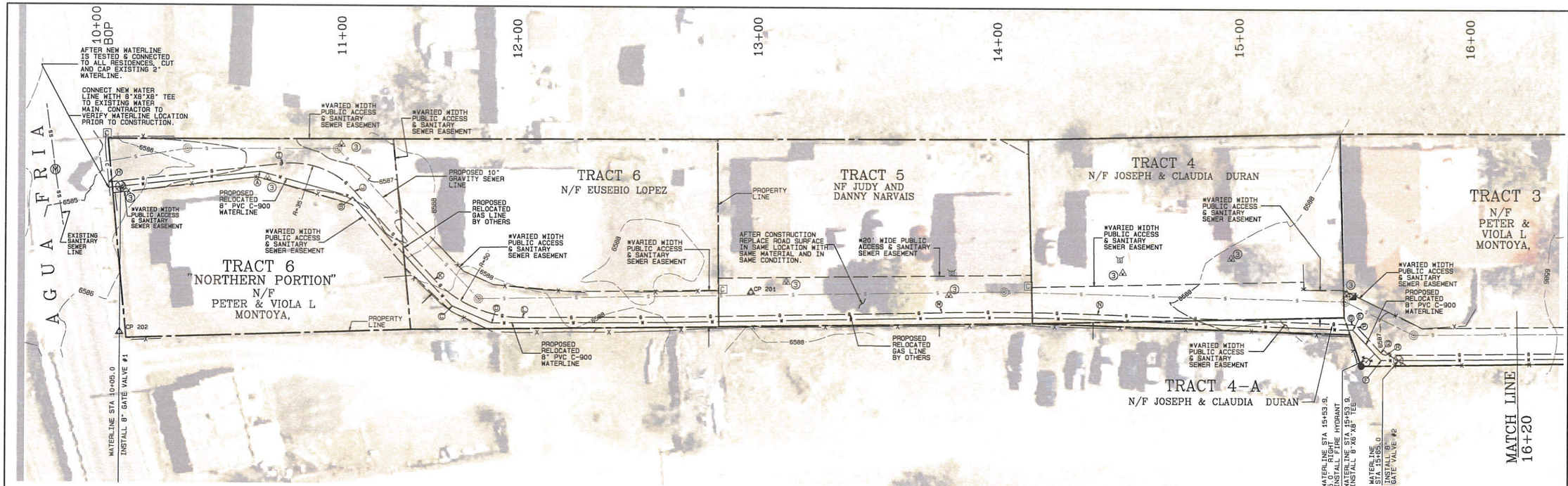
SHEET TITLE
LOW PRESSURE SEWER DESIGN
STA 22+00 TO STA 23+20

No.	REVISION	BY	APPVD.	DATE

PROJECT: ANTONIO LANE SEWER LINE
FILE NAME: 17301
DATE: 8/9/2019
SCALE: HOR 1"=20', VERT 1"=5', CONTOUR INTERVAL=1'

DESIGN: R.A.M.
CHECKED: R.A.M.
DRAWN: J.P.S.

SHEET No.
2.3



LEGEND

- CONTROL POINT; SEE SHEET 1.2
- EXISTING SANITARY SEWER MANHOLE
- PROPOSED MANHOLE
- EXISTING COMMUNICATIONS BOX
- EXISTING WATER METER
- EXISTING TELEPHONE PEDESTAL
- EXISTING GAS METER
- KEYED COORDINATE REFERENCE SEE WATER COORDINATE TABLE
- EXISTING FENCE LINE
- PROPOSED RELOCATED GAS LINE BY OTHERS
- PROPOSED RELOCATED 8" WATERLINE
- PROPOSED SANITARY SEWER LINE
- PROPOSED LOW PRESSURE SEWER LINE
- PROPOSED SEWER LINE CONNECTION

GENERAL NOTES

1. PROJECT CENTERLINE IS COINCIDENT WITH NEW SEWER ALIGNMENT. ALL STATIONS GIVEN REFER TO SAID PROJECT CENTERLINE UNLESS OTHERWISE SPECIFIED.
2. WATER & GAS LINE LOCATIONS SHOWN ARE PER PROPOSED RELOCATED POSITIONS (SEE SHEETS 3.1-3.3)
3. CONTRACTOR TO VERIFY LOCATION OF EXISTING UTILITIES FOR CONNECTION WITH RELOCATED UTILITIES.
4. SPECIFIC WIDTH AND LOCATION OF ALL PUBLIC ACCESS AND UTILITY EASEMENTS IS SHOWN ON EXHIBITS GRANTING SAID EASEMENTS BY APPROPRIATE LAND OWNERS.
5. DISTANCE OF HORIZONTAL SEPARATION BETWEEN GRAVITY SEWER AND WATERLINE IS MINIMUM OF 10' UNLESS NOTED ON DRAWING. IN SITUATIONS WHERE DISTANCE IS LESS THAN 10', FOR MINIMUM OF WATERLINE ABOVE GRAVITY SEWER SEE KEYED NOTES (SHEETS 2.1-2.3) FOR REFERENCE TO SPECIFIC SITUATIONS.
6. EXISTING UNDERGROUND UTILITIES ARE SHOWN BASED ON INFORMATION PROVIDED BY OTHERS.

N

20 10 0 20

SCALE : 1" = 20'
CONTOUR INTERVAL: 1'

* PUBLIC ACCESS & SANITARY SEWER EASEMENTS WITH ASTERISK * ARE TO BE GRANTED BY LAND OWNERS AS PART OF THIS PROJECT AND COORDINATED BY SANTA FE COUNTY PROJECT MANAGER.

PLAN

WATERLINE RELOCATION PLAN AND PROFILE

WATER LINE QUANTITIES

ITEM	QUANTITY
8" PVC C-900 WATER LINE	1,305 LF
11.25° ANGLE ELBOW	1
22.5° ANGLE ELBOW	4
45° ANGLE ELBOW	2
8"X8"X8" TEE	1
8"X6"X8" TEE	1

NOTE: MECHANICAL THRUST RESTRAINTS PER SHEET 1.1 (SANTA FE COUNTY UTILITY GENERAL NOTES #14) TO BE INCIDENTAL TO ABOVE QUANTITIES.

GAS LINE COORDINATE TABLE

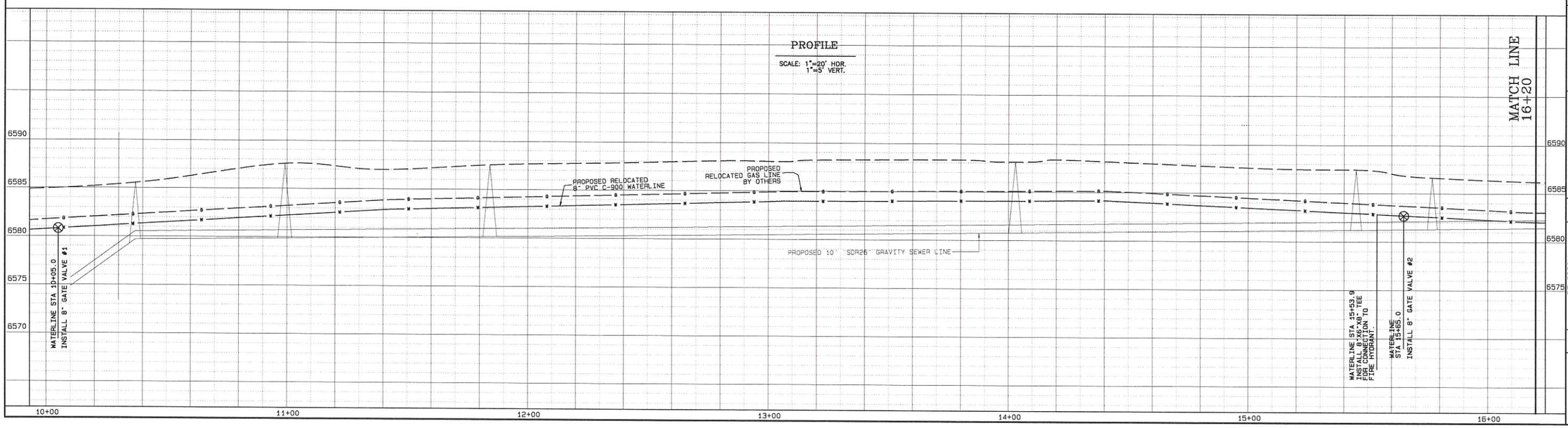
REFERENCE	NORTHING	EASTING
H	1694560.04	1709378.80
I	1694490.30	1709399.46
J	1694458.93	1709393.58
K	1694419.80	1709363.88
L	1694381.04	1709355.01
M	1694209.99	1709388.44
N	1694145.98	1709399.38
O	1694040.77	1709414.32
P	1694036.59	1709413.78
Q	1694026.68	1709405.15
R	1694024.39	1709404.63
S	1693312.24	1709540.41

WATERLINE COORDINATE TABLE

REFERENCE	WATERLINE STATION	DESCRIPTION	NORTHING	EASTING
	10+00.0	(BEGIN WATERLINE CENTERLINE)	1694559.70	1709376.60
GATE VALVE # 1	10+05.0	8" GATE VALVE	1694554.90	1709378.02
A	10+63.2	ANGLE 22.5° Right	1694499.08	1709394.57
B	11+03.2	ANGLE 33.75° Right	1694459.31	1709391.09
C	11+64.0	ANGLE 22.5° Left	1694410.71	1709354.46
D	11+81.9	ANGLE 22.5° Left	1694393.27	1709350.50
E	15+40.5	ANGLE 45° Right	1694040.14	1709412.19
FIRE HYDRANT	15+53.9, 5 Right	FIRE HYDRANT	1694032.21	1709400.27
8"X6"X8" TEE	15+53.9	8"X6"X8" TEE	1694029.26	1709404.31
F	15+57.7	ANGLE 45° Left	1694026.18	1709402.08
GATE VALVE #2	15+65.0	8" GATE VALVE	1694019.00	1709403.35
GATE VALVE #3	20+30.0	8" GATE VALVE	1693562.33	1709490.93
GATE VALVE #4	22+90.0	8" GATE VALVE	1693306.85	1709539.21
CONNECT TO EXISTING	23+05.0	TIE TO EXISTING 6" WATERLINE	1693292.11	1709542.00

PROFILE

SCALE: 1"=20' HOR.
1"=5' VERT.



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PROJECT: SANTA FE COUNTY ANTONIO LANE SANITARY SEWER DESIGN

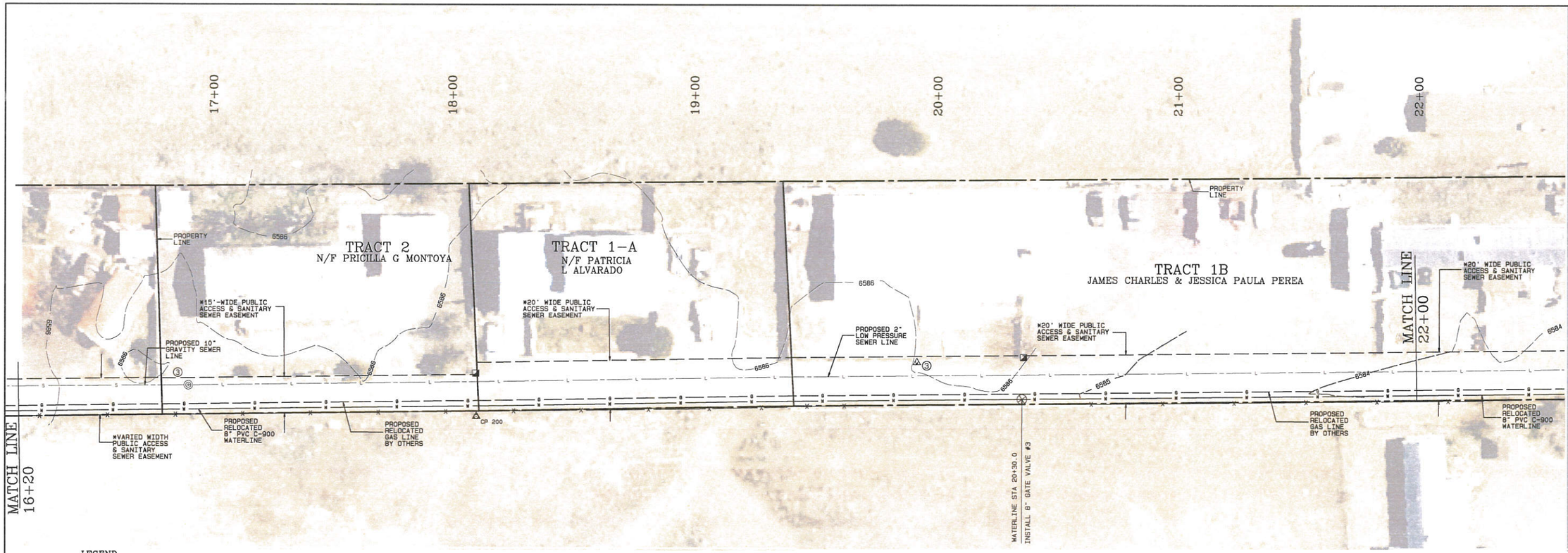
SHEET TITLE: WATERLINE RELOCATION STA 10+00 TO STA 16+20

NO.	REVISION	BY	APPVD.	DATE

PROJECT: ANTONIO LANE SEWER LINE
FILE NAME: 17301
DATE: 8/9/2019
SCALE: HOR 1"=20', VERT 1"=5', CONTOUR INTERVAL=1'

DESIGN: R.A.M.
CHECKED: R.A.M.
DRAWN: J.P.S.

SHEET No.
3.1



LEGEND

- △ CONTROL POINT; SEE SHEET 1.2
- Ⓜ EXISTING SANITARY SEWER MANHOLE
- ◎ PROPOSED MANHOLE
- ⓒ EXISTING COMMUNICATIONS BOX
- ◬ EXISTING WATER METER
- ◪ EXISTING TELEPHONE PEDESTAL
- ⓖ EXISTING GAS METER
- Ⓐ KEYED COORDINATE REFERENCE SEE WATER COORDINATE TABLE
- —X— EXISTING FENCE LINE
- —G— PROPOSED RELOCATED GAS LINE BY OTHERS
- —W— PROPOSED RELOCATED 8" WATERLINE
- —S— PROPOSED SANITARY SEWER LINE
- —L— PROPOSED LOW PRESSURE SEWER LINE
- PROPOSED SEWER LINE CONNECTION

GENERAL NOTES ○

1. PROJECT CENTERLINE IS COINCIDENT WITH NEW SEWER ALIGNMENT. ALL STATIONS GIVEN REFER TO SAID PROJECT CENTERLINE UNLESS OTHERWISE SPECIFIED.
2. WATER & GAS LINE LOCATIONS SHOWN ARE PER PROPOSED RELOCATED POSITIONS (SEE SHEETS 3.1-3.3)
3. CONTRACTOR TO VERIFY LOCATION OF EXISTING UTILITIES FOR CONNECTION WITH RELOCATED UTILITIES.
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6. EXISTING UNDERGROUND UTILITIES ARE SHOWN BASED ON INFORMATION PROVIDED BY OTHERS.

20 10 0 20

SCALE : 1" = 20'
CONTOUR INTERVAL: 1'

* PUBLIC ACCESS & SANITARY SEWER EASEMENTS WITH ASTERISK * ARE TO BE GRANTED BY LAND OWNERS AS PART OF THIS PROJECT AND COORDINATED BY SANTA FE COUNTY PROJECT MANAGER.

PLAN

WATERLINE RELOCATION PLAN AND PROFILE

WATER LINE QUANTITIES

ITEM	QUANTITY
8" PVC C-900 WATER LINE	1,305 LF
11.25° ANGLE ELBOW	1
22.5° ANGLE ELBOW	4
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8"X8"X8" TEE	1
8"X6"X8" TEE	1

NOTE: MECHANICAL THRUST RESTRAINTS PER SHEET 1.1 (SANTA FE COUNTY UTILITY GENERAL NOTES #14) TO BE INCIDENTAL TO ABOVE QUANTITIES.

GAS LINE COORDINATE TABLE

REFERENCE	NORTHING	EASTING
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FIRE HYDRANT	15+53.9, 5 Right	FIRE HYDRANT	1694032.21	1709400.27
8"X6"X8" TEE	15+53.9	8"X6"X8" TEE	1694028.26	1709404.31
F	15+57.7	ANGLE 45° Left	1694026.18	1709402.08
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GATE VALVE #3	20+30.0	8" GATE VALVE	1693562.33	1709490.93
GATE VALVE #4	22+90.0	8" GATE VALVE	1693306.85	1709539.21
CONNECT TO EXISTING	23+05.0	TIE TO EXISTING 6" WATERLINE	1693292.11	1709542.00

PROFILE

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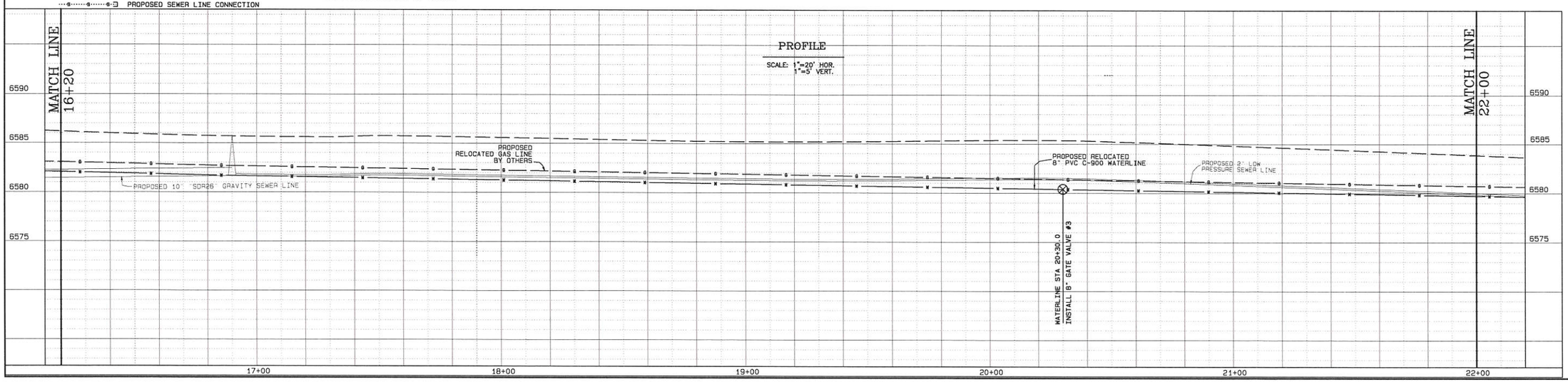

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PROJECT
SANTA FE COUNTY
ANTONIO LANE SANITARY SEWER DESIGN

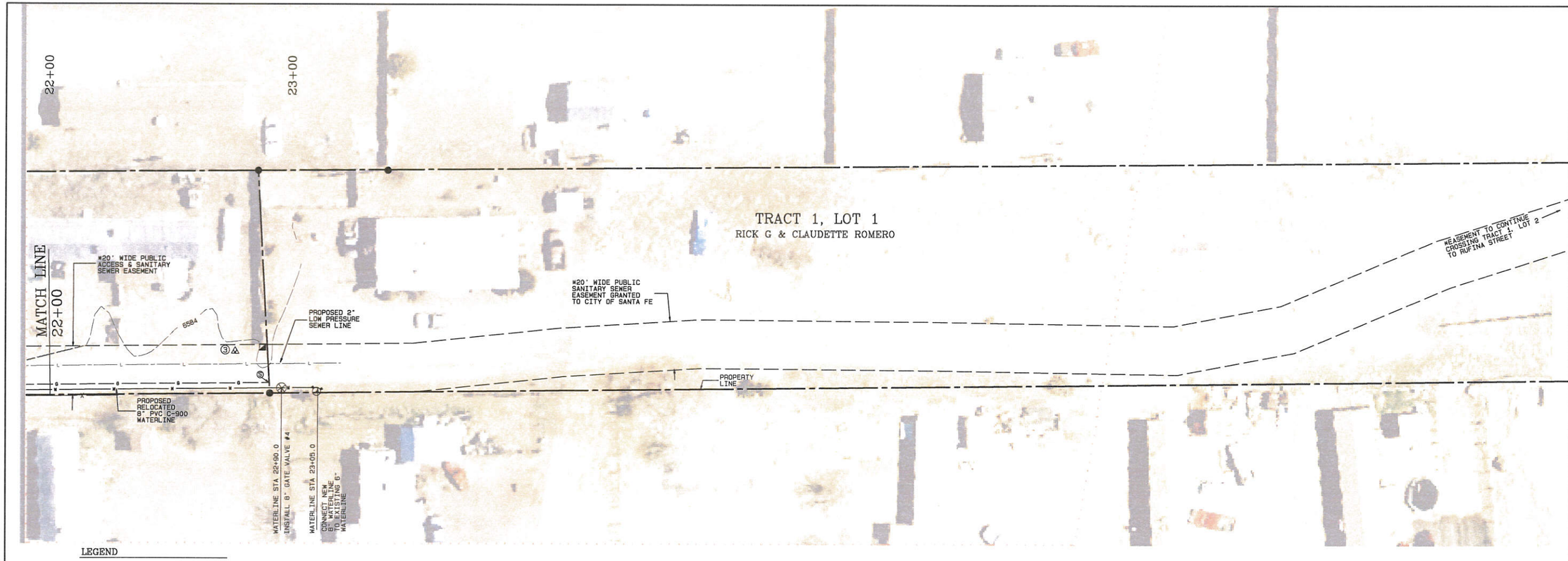
SHEET TITLE
WATERLINE RELOCATION
STA 16+20 TO STA 22+00

No.	REVISION	BY	APPVD.	DATE

PROJECT: ANTONIO LANE SEWER LINE
FILE NAME: 17301
DATE: 8/9/2019
SCALE: HOR 1"=20', VERT 1"=5', CONTOUR INTERVAL=1'

DESIGN: R.A.M.
CHECKED: R.A.M.
DRAWN: J.P.S.

SHEET No.
3.2



LEGEND

- △ CONTROL POINT; SEE SHEET 1.2
- Ⓜ EXISTING SANITARY SEWER MANHOLE
- ◎ PROPOSED MANHOLE
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- ——L—— PROPOSED LOW PRESSURE SEWER LINE
- ···6"···6"···6"·□ PROPOSED SEWER LINE CONNECTION

GENERAL NOTES ○

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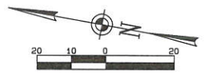

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PLAN

WATERLINE RELOCATION
PLAN AND PROFILE

WATER LINE QUANTITIES

ITEM	QUANTITY
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PROFILE

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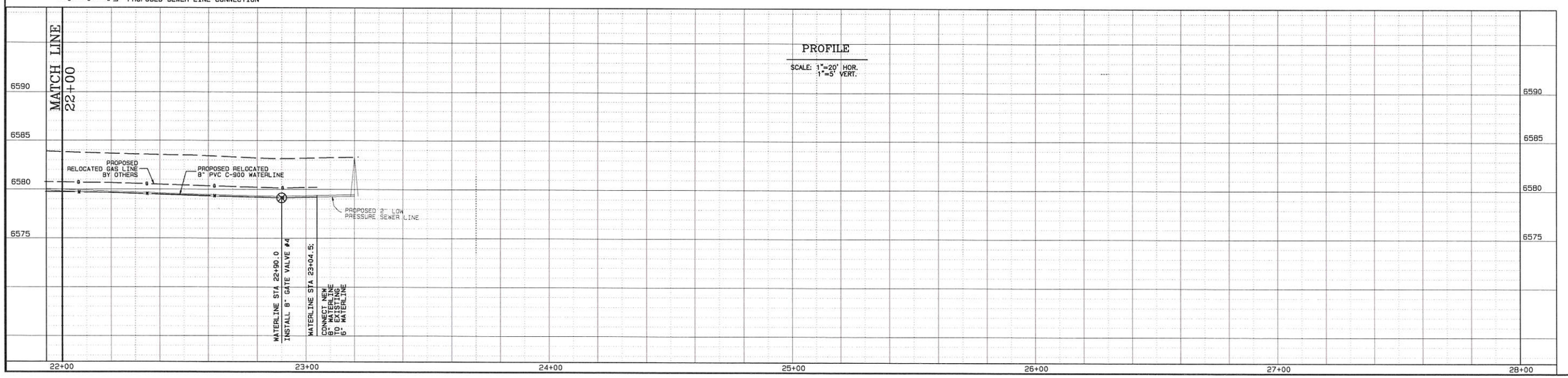
1"=5' VERT.



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SANTA FE COUNTY
ANTONIO LANE SANITARY SEWER DESIGN

PROJECT

WATERLINE RELOCATION
STA 22+00 TO STA 23+05

SHEET TITLE

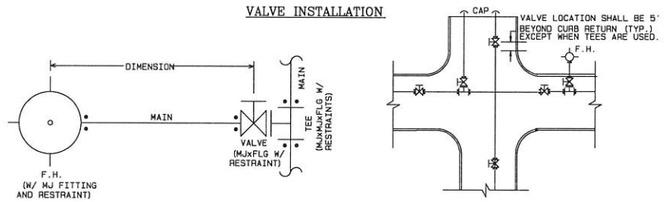
NO	REVISION	BY	APPVD.	DATE

PROJECT: ANTONIO LANE SEWER LINE
FILE NAME: 17301
DATE: 8/9/2019
SCALE: HOR 1"=20', VERT 1"=5', CONTOUR INTERVAL=1'

DESIGN: R.A.M.
CHECKED: R.A.M.
DRAWN: J.P.S.

SHEET No.
3.3

VALVE INSTALLATION



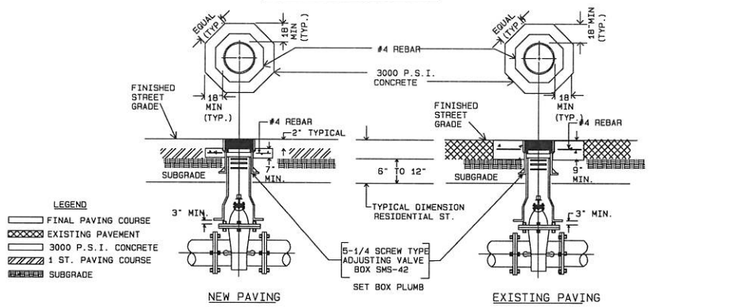
VALVES 1.) VALVES SHALL BE LOCATED AT ROAD INTERSECTIONS WITH THE INTENT OF ISOLATING THE WATER DISTRIBUTION SYSTEM, AS APPROVED BY SANTA FE COUNTY PROJECT MANAGER (SFCPM).

2.) INLINE VALVES SHALL TYPICALLY BE INSTALLED FIVE (5) FEET BEYOND THE CURB RETURN, AS SHOWN IN THE DETAIL, AND CONSIST OF MECHANICAL JOINT FITTINGS WITH RESTRAINTS EXCEPT WHEN USING TEES, WHICH SHALL HAVE MECHANICAL JOINT x FLANGE FITTING.

3.) VALVES ON FIRE HYDRANT LEGS SHALL HAVE MECHANICAL JOINT x FLANGE FITTINGS AND SHALL CONNECT TO FIRE HYDRANT TEE WITH THE FLANGE FITTING AND THE MECHANICAL JOINT FITTING SHALL HAVE A RESTRAINT, AS SHOWN IN THE DETAIL.

4.) VALVES ON TEES SHALL HAVE VALVES AND TEES WITH MECHANICAL JOINT x FLANGE FITTINGS. THE MECHANICAL JOINT FITTING SHALL HAVE A RESTRAINT, AS SHOWN IN THE DETAIL.

VALVE BOX INSTALLATION



UNPAVED AREAS IN DIRT OR GRAVEL STREETS, TOP OF VALVE BOX AND CONCRETE COLLAR SHALL BE LEFT 6" BELOW THE STREET GRADE. IN OTHER UNPAVED AREAS, VALVE BOX AND CONCRETE COLLAR SHALL BE LEFT 2" ABOVE FINISHED GRADE OR AS DIRECTED BY SFCPM.

PROTECTION OF VALVE BOXES VALVE BOXES SHALL BE PROTECTED FROM DAMAGE. LOSS AND SHALL NOT BE FILLED WITH DIRT AND DEBRIS. VALVES MUST BE ACCESSIBLE DURING CONSTRUCTION WITH MINIMUM EXCAVATION. VALVES IDENTIFIED BY SFCPM AS KEY SHUT OFF VALVES SHALL REMAIN AT GRADE DURING ALL PHASES OF CONSTRUCTION.

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PROJECT
SANTA FE COUNTY
ANTONIO LANE SANITARY SEWER DESIGN

SHEET TITLE
WATERLINE DETAILS

NO.	REVISION	BY	APPVD.	DATE

PROJECT:ANTONIO LANE SEWER LINE
FILE NAME:17301
DATE: 6/9/2019
SCALE: HOR 1"=20', VERT 1"=5', CONTOUR INTERVAL=1'

DESIGN: R.A.M.
CHECKED: R.A.M.
DRAWN: J.P.S.

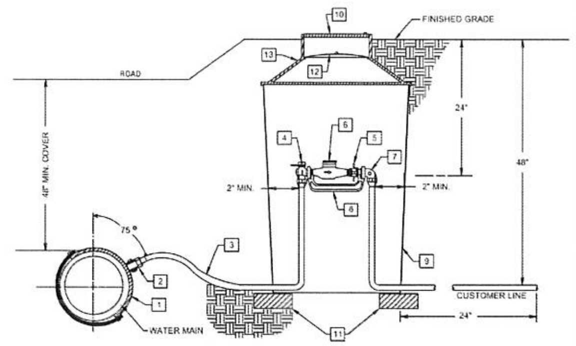
SHEET No.
4.1

GENERAL NOTES

1. CONTRACTOR SHALL NOTIFY THE SANGRE DE CRISTO WATER (SDCW) FIVE (5) DAYS PRIOR TO COMMENCEMENT OF WORK.
2. CONSTRUCTION SHALL BE DONE IN ACCORDANCE WITH THE SDCW CONSTRUCTION STANDARDS AND SPECIFICATIONS.
3. ALL EASEMENTS SHALL BE DEDICATED, CLEARED, GRADED AND STAKED PRIOR TO WATER LINE INSTALLATION.
4. ALL STREETS SHALL BE CUT TO WITHIN ±6" OF FINAL GRADE PRIOR TO WATER LINE INSTALLATION.
5. LOT CORNERS SHALL BE STAKED PRIOR TO SERVICE LINE INSTALLATION. CURB, GUTTER AND DRIVEWAY APRON SHALL BE INSTALLED PRIOR TO SERVICE LINE INSTALLATION UNLESS OTHERWISE APPROVED IN WRITING BY SDCW.
6. CONTRACTOR (DEVELOPER) SHALL PROVIDE CONSTRUCTION STAKING UTILIZING THE APPROPRIATE RIGHT-OF-WAY MAPS, SIGNED PLATS AND SDCW DRAWINGS.
7. MATERIAL SUBMITTALS SHALL BE APPROVED BY SDCW PRIOR TO CONSTRUCTION.
8. CONTACT **NEW MEXICO ONE CALL AT 811** TWO (2) WORKING DAYS IN ADVANCE OF CONSTRUCTION FOR UTILITY SPOTS.
9. PRESSURE REGULATORS SHALL BE INSTALLED ON ALL SERVICES DOWNSTREAM FROM THE METER.
10. A MINIMUM OF 4 FEET COVER TO TOP OF PIPE SHALL BE MAINTAINED ON ALL WATER MAINS AND SERVICES.
11. CONTRACTOR SHALL SUBMIT AS-BUILT CONSTRUCTION PACKET WITHIN FIVE (5) DAYS OF COMPLETION OF CONSTRUCTION INCLUDING: VALVE TIES, AS-BUILT DRAWINGS (INCLUDING, BUT NOT LIMITED TO: FITTING-TO-FITTING MEASUREMENTS, SERVICE-TO-SERVICE MEASUREMENTS, CENTER OF MAIN TO CENTER OF SERVICE MEASUREMENTS, LENGTH OF MAIN INSTALLED, FITTINGS INSTALLED, ETC.) AND POTABILITY RESULTS.
12. ALL VALVE BOXES SHALL BE BROUGHT UP TO GRADE AFTER FIRST COURSE OF ASPHALT AND BEFORE FINAL COURSE OF ASPHALT.
13. FIRE HYDRANTS SHALL BE NUMBERED USING REFLECTIVE NUMERALS. THE REFLECTIVE NUMERALS SHALL BE OBTAINED BY THE CONTRACTOR FOR THE SDCW FIELD REPRESENTATIVE AT THE TIME THE NOTICE TO PROCEED (NTP) IS ISSUED. NUMBERS SHALL BE LEGIBLE FROM THE ROAD. PRIOR TO INSTALLING NUMBERS, FIRE HYDRANTS SHALL BE PAINTED.
14. A MECHANICAL RESTRAINT SYSTEM SHALL BE UTILIZED ON FITTINGS AND PIPING FOR THRUST RESTRAINT. CONCRETE THRUST BLOCKING SHALL BE USED ONLY FOR SPECIAL CONDITIONS (E.G. CAPS WHERE MAIN WILL BE EXTENDED IN THE FUTURE) AS SPECIFICALLY APPROVED BY SDCW.
15. ANY FIELD CHANGES TO THESE PLANS REQUIRE APPROVAL OF BOTH THE DESIGN ENGINEER AND SDCW.
16. WORK ON SDCW FACILITIES SHALL NOT BEGIN UNTIL SDCW HAS ISSUED A NTP TO THE APPROVED UTILITY CONTRACTOR.

SANGRE DE CRISTO WATER DIVISION
CITY OF SANTA FE, NEW MEXICO
STANDARD DETAILS

GENERAL NOTES — 01



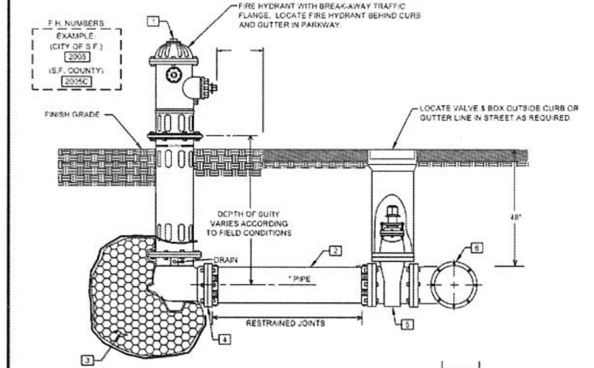
NOTE: SEE SERVICE LOCATION DETAIL FOR PLACEMENT DIMENSIONS AND DIRECTIONS.

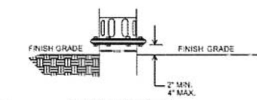
ITEM

1. 3/4" SERVICE SADDLE
2. 3/4" CORORATION STOP (A.W.W.A. TAPERED THREAD)
3. 3/4" COPPER TUBING (TYPE " K ")
4. 3/4" ANGLE VALVE
5. 3/4" EXPANSION CONNECION (5/8" X 3/4" M.T.R. CONN.)
6. 5/8" X 3/4" SEALED REGISTER WATER METER (FURNISHED & INSTALLED BY
7. 3/4" ANGLE ELL WITH TEST VALVE
8. 3/4" CAST IRON METER YOKE
9. 20" DIA. X 36" METER BOX
10. POLYMER LID (12-5/16" DIA.)
11. BLOCKS - USE AS DIRECTED BY
12. INNER ALUMINUM FROST LID
13. DOUBLE LID COVER (20" DIA. X 11-1/2" DIA. INNER OPENING)

SANGRE DE CRISTO WATER DIVISION
CITY OF SANTA FE, NEW MEXICO
STANDARD DETAILS

5/8" SINGLE SERVICE — 02





FIRE HYDRANT DETAIL

KEYED NOTES:

1. FIRE HYDRANT
2. " PIPE
3. 1/2 CUBIC YARD 3/8" GRAVEL DRAIN W/ 10 MIL. PLASTIC SHEET
4. " MJ RETAINER AND " HARNESS (IF REQUIRED)
5. " MJ x FL GATE VALVE & BOX
6. TEE: MJ RUN W/ " FLANGE OUTLET

CONSTRUCTION NOTES:

A - FIRE HYDRANT SHALL NOT BE INSTALLED NEAR ANY STRUCTURES AND SHALL HAVE A MINIMUM 36" CLEAR SPACE IN ALL DIRECTIONS.

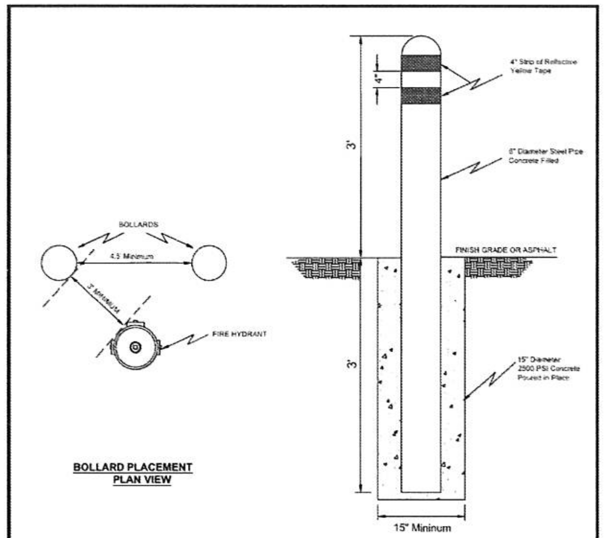
B - LOCATE HYDRANT 18" BEHIND BACK OF CURB UNLESS OTHERWISE SHOWN ON PLANS OR SPECIFICALLY DIRECTED BY HYDRANT TO BE SET PLUMB AND AT PROPER ELEVATION (ELEVATION PROVIDED BY DEVELOPER) HYDRANTS INSTALLED AS PART OF A NEW DEVELOPMENT/EXTENSION SHALL BE A STANDARD 5' BURY HYDRANT AND SHALL BE SET TO FINISHED GRADE WITHOUT THE USE OF HYDRANT EXTENSIONS (IF AN ADJUSTMENT IS REQUIRED, RE-LAY THE WATER MAIN AND FIRE HYDRANT LEG OR INSTALL RESTRAINED OFFSET AS DIRECTED BY

C - WEEP HOLE MUST HAVE 1/4" PLUG REMOVED AND BE FREE DRAINING INTO GRAVEL DRAIN. USE FULLY RESTRAINED JOINTS FROM THE FIRE HYDRANT TO THE FLANGED CONNECTION ON VALVE.

D - FIRE HYDRANT SHALL BE PAINTED AND REFLECTIVE NUMBERS INSTALLED AFTER INSTALLATION.

SANGRE DE CRISTO WATER DIVISION
CITY OF SANTA FE, NEW MEXICO
STANDARD DETAILS

FIRE HYDRANT — 07



BOLLARD PLACEMENT
PLAN VIEW

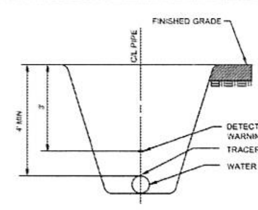
BOLLARD DETAIL

CONSTRUCTION NOTES:

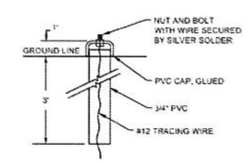
1. BOLLARDS SHALL BE INSTALLED IF THERE IS NO CURB BETWEEN THE ROAD SURFACE AND THE HYDRANT OR WHENEVER REQUIRED BY BOLLARDS SHALL NOT BE PLACED IN THE CLEAR ZONE OF THE ROADWAY AS DEFINED IN THE AMERCIAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS' (AASHTO) "ROADSIDE DESIGN GUIDE."
2. BOLLARDS SHALL BE LOCATED A MINIMUM OF 3 FEET FROM THE FIRE HYDRANT.
3. BOLLARDS SHALL BE PAINTED WITH WELLBORN TRAFFIC YELLOW, SHERWIN WILLIAMS UTILITY YELLOW, OR APPROVED EQUAL.
4. BOLLARDS SHALL BE FILLED WITH CONCRETE AFTER INSTALLATION. THE TOP OF THE BOLLARD SHALL BE ROUNDED AS SHOWN TO PREVENT WATER ACCUMULATION.

SANGRE DE CRISTO WATER DIVISION
CITY OF SANTA FE, NEW MEXICO
STANDARD DETAILS

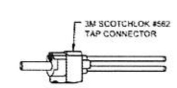
FIRE HYDRANT BOLLARD DETAIL — 07B



TRENCH CROSS SECTION

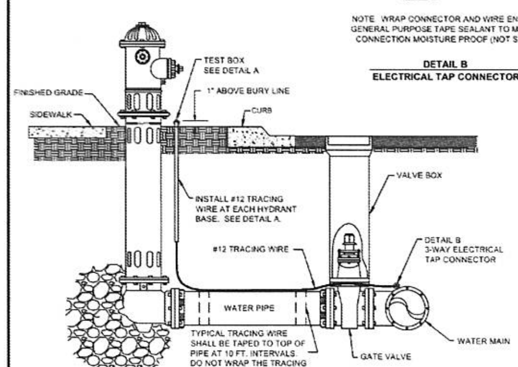


DETAIL A
TEST BOX



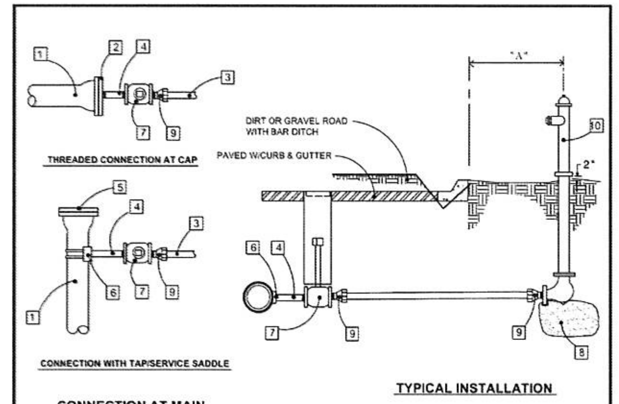
NOTE: WRAP CONNECTOR AND WIRE ENDS WITH GENERAL PURPOSE TAPE SEALANT TO MAKE THE CONNECTION MOISTURE PROOF (NOT SHOWN)

DETAIL B
ELECTRICAL TAP CONNECTOR



SANGRE DE CRISTO WATER DIVISION
CITY OF SANTA FE, NEW MEXICO
STANDARD DETAILS

TRACING WIRE DETAIL — 24



KEYED NOTES

1. RESTRAINED DEAD END MAIN
2. MJ CAP/PLUG W / 2" TAP
3. 2" TYPE-K COPPER
4. 2" BRASS NIPPLE
5. MJ CAP/PLUG
6. 2" SERVICE SADDLE W / IPS THREADS
7. 2" HEAVY DUTY THREADED GATE VALVE W / BOX
8. 1/4 YARD OF GRAVEL AT DRAIN
9. ADAPTER: 2" COMPRESSION x 2" MIP
10. 2-1/4" POST TYPE HYDRANT WITH SANTA FE THREADS

CONSTRUCTION NOTES

1. DIMENSION "A" IS TYPICAL 18" BACK OF CURB TO VALVE IN PAVED AREAS AND IS MINIMUM OF 18" BEHIND BAR DITCH IN UNPAVED AREAS BUT CAN BE EXTENDED UP TO 72" TO FIT FIELD CONDITIONS.

SANGRE DE CRISTO WATER DIVISION
CITY OF SANTA FE, NEW MEXICO
STANDARD DETAILS

FLUSH HYDRANT — 11

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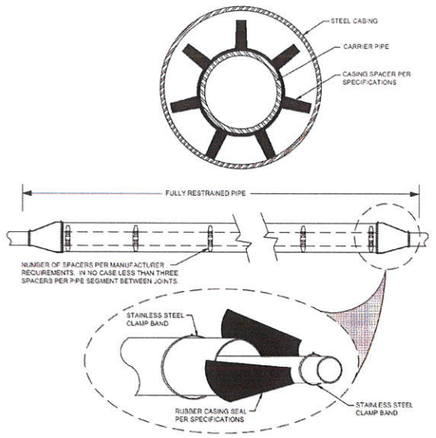
PROJECT
SANTA FE COUNTY
ANTONIO LANE SANITARY SEWER DESIGN

SHEET TITLE
WATERLINE DETAILS

No.	REVISION	BY	APPVD.	DATE

PROJECT: ANTONIO LANE SEWER LINE
FILE NAME: 17301
DATE: 8/9/2019
SCALE: HOR 1"=20', VERT 1"=5', CONTOUR INTERVAL=1'
DESIGN: R.A.M.
CHECKED: R.A.M.
DRAWN: J.P.S.

SHEET No.
4.2



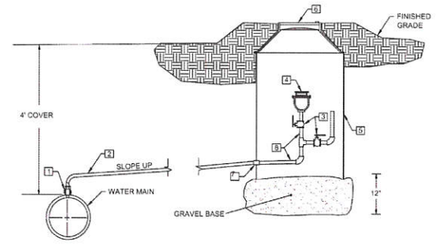
CASING SIZE VERSUS CARRIER SIZE

Carrier Pipe (Nominal Size)	Steel Casing Diameter and Wall Thickness
6"	14" Schedule 30
8"	16" Schedule 30
10"	18" Standard Class
12"	20" Standard Class
14"	24" Schedule 20
16"	26" Schedule 20
20"	30" 0.375" Wall
24"	36" 0.375" Wall
3/4"-2" Cu Tubing	4" Schedule 40 PVC
3/4"-2" Cu Tubing	4" Schedule 40 Steel

SANGRE DE CRISTO WATER DIVISION
CITY OF SANTA FE, NEW MEXICO
STANDARD DETAILS

PIPE CASING DETAIL

16



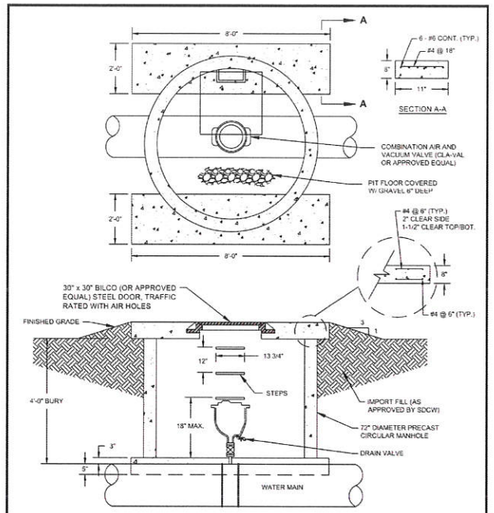
ITEM	DESCRIPTION
1	1" TAPPING SADDLE 1" CORPORATION COCK (A.W.W.A. TAPERED THEAD)
2	1" TYPE K COPPER
3	1" BRASS BALL VALVE
4	1" NPT COMBINATION AIR & VACUUM UNIT VALVE & PRESSURE UNIT: CRESPIN C10 OR C20 WITH PROTECT-TOP
5	36" x 36" -20# POLYETHYLENE METER BOX
6	36" MONITOR RING WITH 20" COVER WITH INNER LID
7	1" ADAPTER COUPLING
8	1" THREADED BRASS PIPE

LOCATION: WHERE WATER MAIN IS INSTALLED IN ROAD, THE AIR-VACUUM VALVE INSTALLATION SHALL BE LOCATED OUT OF THE PAVEMENT AND OUT OF BAR DITCH, BUT WITHIN RIGHT-OF-WAY OR EASEMENT.

SANGRE DE CRISTO WATER DIVISION
CITY OF SANTA FE, NEW MEXICO
STANDARD DETAILS

1" AND 2" AIR-VACUUM VALVE

17

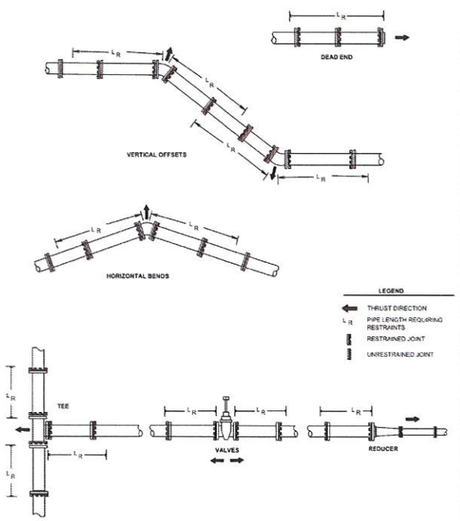


NOTE:
1. 3" (MODEL 363CAV332FT, CL125 FLANGE), 4" (MODEL MTP364/34.116.3, CL250 FLANGE-MODEL MTP364/34.332, CL125 FLANGE) & 6" (MODEL MTP366/34.116.3, CL250 FLANGEMODEL MTP366/34.332 CL125 FLANGE) AIR & VACUUM VALVES SHALL BE MANUFACTURED BY CLA-VAL (OR APPROVED EQUAL).

SANGRE DE CRISTO WATER DIVISION
CITY OF SANTA FE, NEW MEXICO
STANDARD DETAILS

3" and Larger Air-Vacuum Valve Vault

20



SANGRE DE CRISTO WATER DIVISION
CITY OF SANTA FE, NEW MEXICO
STANDARD DETAILS

JOINT RESTRAINT TABLE

10B

SANGRE DE CRISTO WATER DIVISION
CITY OF SANTA FE, NEW MEXICO
STANDARD DETAILS

JOINT RESTRAINT TABLE

10A

THRUST RESTRAINT TABLE
BENDS, TEES, CAPS/VALVES, & REDUCERS
(RESTRAINED JOINT LENGTHS IN FEET)

DIAMETER (IN.)	HORIZONTAL BENDS 11-1/4° L_R	22-1/2° L_R	45° L_R	90° L_R	CAPS / PLUGS / VALVES L_R
4	FJO	2	3	12	34
6	2	3	7	17	47
8	2	4	9	23	62
10	3	5	11	27	75
12	3	6	13	32	88

DIAMETER (IN.)	VERTICAL BENDS 11-1/4° L_R TOP/BOTTOM	22-1/2° L_R TOP/BOTTOM	45° L_R TOP/BOTTOM	90° L_R TOP/BOTTOM
4	3 / 2	7 / 4	14 / 9	N/A
6	5 / 3	9 / 6	20 / 12	N/A
8	6 / 4	12 / 7	26 / 15	N/A
10	7 / 4	15 / 9	31 / 18	N/A
12	9 / 5	18 / 10	37 / 21	N/A

SIZE (IN.) Lg/ Sm/ Run X Br.	TEES Run L_R	Branch L_R	Run L_R	Branch L_R	Run L_R	Branch L_R	REDUCERS L_R
4 X 4	FJO	28	5	8	10	FJO	N/A
6 X 6	FJO	42	5	21	10	FJO	N/A
6 X 4	FJO	26	5	FJO	10	FJO	24
8 X 8	FJO	57	5	36	10	10	N/A
8 X 6	FJO	40	5	13	10	FJO	26
8 X 4	FJO	23	5	FJO	10	FJO	45
10 X 10	FJO	69	5	48	10	21	N/A
10 X 8	FJO	55	5	29	10	FJO	25
10 X 6	FJO	39	5	4	10	FJO	46
10 X 4	FJO	21	5	FJO	10	FJO	61
12 X 12	FJO	83	5	61	10	34	N/A
12 X 10	FJO	68	5	42	10	10	43
12 X 8	FJO	54	5	22	10	FJO	47
12 X 6	FJO	37	5	FJO	10	FJO	64
12 X 4	FJO	18	5	FJO	10	FJO	77

Table: This table is based on the EBAA Iron Megaflug joint calculations program with the following input criteria: 3.5 ft. depth of bury (conservative); trench type 4; PVC pipe material; GM soil type; 150 psi test pressure; 1.5 safety factor. Specific calculations for restrained lengths are required for conditions not covered by this table.

L_R: Length of restrained pipe, in feet, for each side of the fitting.

Minimum Restrained Length: A minimum restrained length of 5 ft. from the fitting joint is recommended. Vertical offsets shall be completely restrained between the top vertical fitting and the bottom vertical fitting.

FJO: Fitting Joint Only -- This includes at least a 1 ft. length of restrained pipe beyond the fitting joint.

Vertical Offset: Use 11-1/2° bends or 22-1/2° bends wherever possible due to the shorter restrained length requirements.

Caps/Plugs: Concrete blocking may be required by on a case-by-case basis in addition to mechanical restraint.

Pipe Lengths: Piping shall be laid out to minimize pipe joints near fittings. Wherever possible, full 20 ft. pipe lengths shall be utilized when connecting to fittings or valves. No pipe bell joints shall be used where fittings are less than 20 ft. apart.

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PROJECT
SANTA FE COUNTY
ANTONIO LANE SANITARY SEWER DESIGN

SHEET TITLE
WATERLINE DETAILS

No.	REVISION	BY	APPVD.	DATE

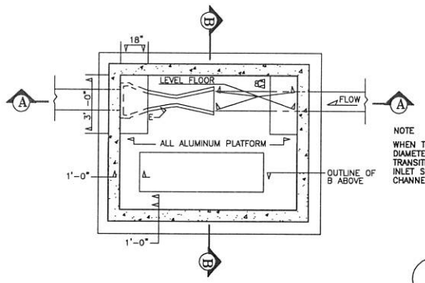
PROJECT: ANTONIO LANE SEWER LINE
FILE NAME: 17301
DATE: 8/9/2019
SCALE: HOR 1"=20', VERT 1"=5', CONTOUR INTERVAL=1'

DESIGN: R.A.M.
CHECKED: R.A.M.
DRAWN: J.P.S.

SHEET No.
4.3

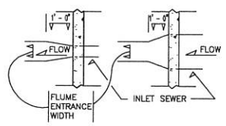
TABLE 1

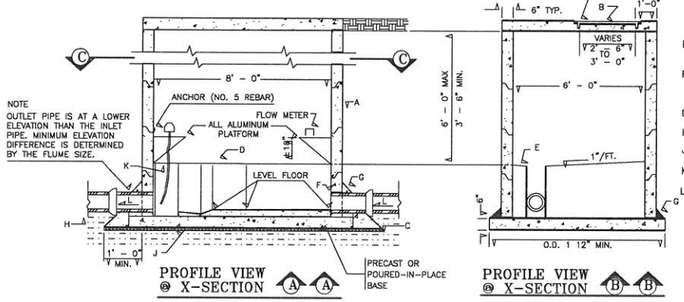
Pipe Size	Required Inlet Slope
4 in.	0.0060 ft/ft
6	0.0050
8	0.0040
10	0.0028
12	0.0022
15	0.0015
18	0.0012



PLAN VIEW @ X-SECTION (C)(C)

NOTE
WHEN THE INLET SEWER IS SMALLER OR LARGER, IN DIAMETER THAN THE FLUME ENTRANCE WIDTH, A SMOOTH TRANSITION SHALL BE PROVIDED CHANGING FROM THE INLET SEWER DIAMETER TO THE FLUME ENTRANCE CHANNEL WIDTH OVER THE FIRST FOOT INSIDE THE MH.





PROFILE VIEW @ X-SECTION (A)(A)

PROFILE VIEW @ X-SECTION (B)(B)

NOT TO SCALE

SANITARY SEWER SAMPLING & METERING MANHOLE DETAIL (6x8 RECTANGLAR)/DWG. #IP-2

GENERAL NOTES

1. THIS DESIGN IS APPLICABLE FOR MANHOLES 6.0 FT. & LESS IN DEPTH MEASURED FROM FLOOR TO CONCRETE COVER. DEPTHS GREATER THAN 6.0 FT. WILL REQUIRE THE 8' DIAMETER, ROUND MANHOLE PER DWG NO. IP-1.
2. INDUSTRIAL MANHOLE SHALL BE LOCATED ON PRIVATE PROPERTY OUTSIDE OF CITY RIGHT-OF-WAY. CITY PERSONNEL SHALL HAVE ACCESS TO THE MANHOLE AT ALL TIMES OF THE DAY OR NIGHT.
3. NOT ALL INSTALLATIONS WILL REQUIRE THE ALUMINUM PLATFORMS. SAMPLER AND FLOW METERING APPARATUS TO BE PROVIDED BY THE INDUSTRIAL USER. FINAL DECISIONS RELATIVE TO THE REQUIREMENT FOR MONITORING EQUIPMENT AND THE SPECIFIC TYPE OF FLUME WILL BE MADE BY THE PRETREATMENT SECTION, WATER QUALITY DIVISION FOR EACH INDIVIDUAL CASE.
4. A PARSHALL FLUME OR PALMER BOWLUS FLUME SHALL BE FURNISHED AND INSTALLED IN ACCORDANCE WITH THIS DETAIL. THE FLUME MUST BE SIZED TO ACCURATELY MEASURE ALL ANTICIPATED FLOW LEVELS. PRIOR TO INSTALLATION THE FLUME SIZE, AND TYPE MUST BE APPROVED BY THE PRETREATMENT SECTION, WATER QUALITY DIVISION.
5. IN ORDER TO CONTROL VELOCITIES AT A LEVEL THAT ALLOWS FOR ACCURATE FLOW MEASUREMENT, SLOPES ON THE INLET SEWER LINES FOR 20 FT. OUTSIDE THE MANHOLE MUST BE AS SPECIFIED IN TABLE 1 FOR THE VARIOUS SIZE LINES. OUTLET SEWER LINES MUST BE DESIGNED TO CONVEY THE MAXIMUM DESIGN FLOWS WITHOUT CREATING A SURCHARGE CONDITION IN THE FLUME.

CONSTRUCTION NOTES

A. ALL MANHOLE BASES, RISER SECTIONS AND FLAT SLAB TOP SECTIONS SHALL BE PRECAST REINFORCED CONCRETE IN ACCORDANCE WITH CITY SPECIFICATIONS.

B. FRAME & COVER FOR NON-TRAFFIC AREAS SHALL BE NEENAH R-6661-VIH OR EQ. FOR TRAFFIC OR PARKING AREAS, IT SHALL BE NEENAH R-6663-0H OR EQUAL.

C. CONCRETE PIPE SUPPORTS SHALL EXTEND OUTSIDE THE MANHOLE TO BELL OF FIRST JOINT AND SHALL CRADLE PIPE TO THE SPRING LINE.

D. PREFABRICATED MONITORING FLUME TO BE INSTALLED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS AND SHALL BE MANUFACTURED BY MANNING. PLASTI-FAB OR APPROVED EQUAL. A PARSHALL FLUME OR A PALMER BOWLUS FLUME SHALL BE INSTALLED AS DIRECTED BY THE PRETREATMENT SECTION, WATER QUALITY CONTROL DIVISION.

E. CONCRETE FILLETS, USE 3000 PSI CONC. WITH TYPE II CEMENT. FILLETS TO MATCH TOP OF FLUME AND SLOPE ONE INCH FER FOOT.

F. MANHOLE PIPE CONNECTIONS TO BE PER ASTM C-923; STANDARD SPEC. FOR RESILIENT CONNECTORS BETWEEN REINFORCED CONCRETE MANHOLE STRUCTURES AND PIPES. RESILIENT CONNECTORS TO BE A-LOK OR APPROVED EQUAL.

G. 6 IN. GROUT FILLET ON UPPER HALF OF PIPE AND AROUND BASE.

H. 6" SUBGRADE AND BACKFILL COMPACTED TO 95% MODIFIED PROCTOR.

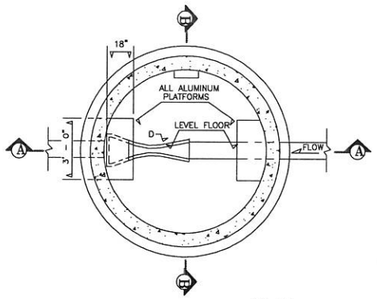
J 2 IN. GRAVEL CRUSHED STONE LEVELING COURSE.

K FLUME OUTLET END ADAPTER, PLASTI-FAB OR APPROVED EQUAL

L SLOPE PER TABLE 1.

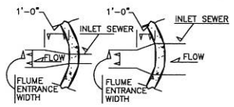
TABLE 1

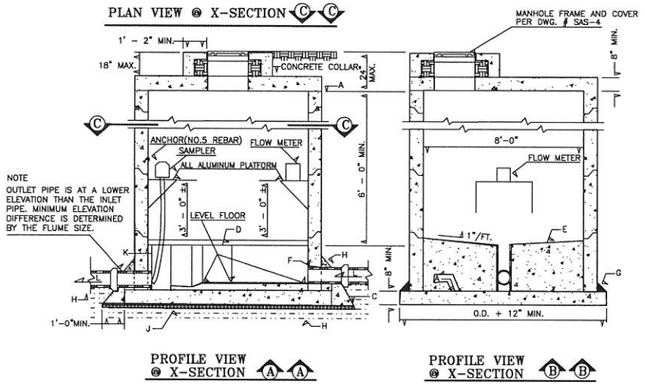
Pipe Size	Required Inlet Slope
4 in.	0.0060 ft/ft
6	0.0050
8	0.0040
10	0.0028
12	0.0022
15	0.0015
18	0.0012



PLAN VIEW @ X-SECTION (C)(C)

NOTE
WHEN THE INLET SEWER IS SMALLER OR LARGER, IN DIAMETER THAN THE FLUME ENTRANCE WIDTH, A SMOOTH TRANSITION SHALL BE PROVIDED CHANGING FROM THE INLET SEWER DIAMETER TO THE FLUME ENTRANCE CHANNEL WIDTH OVER THE FIRST FOOT INSIDE THE MH.





PROFILE VIEW @ X-SECTION (A)(A)

PROFILE VIEW @ X-SECTION (B)(B)

NOT TO SCALE

SANITARY SEWER SAMPLING & METERING MANHOLE DETAIL (8 FT. DIA.)/DWG. #IP-1

GENERAL NOTES

1. THIS DESIGN IS APPLICABLE FOR MANHOLES 6.0 FT. & GREATER IN DEPTH MEASURED FROM FLOOR TO CONCRETE COVER. DEPTHS LESS THAN 6.0 FT. WILL REQUIRE THE 6x8 RECTANGULAR MANHOLE PER DWG. # IP-2.
2. INDUSTRIAL MANHOLE SHALL BE LOCATED ON PRIVATE PROPERTY OUTSIDE OF CITY RIGHT-OF-WAY. CITY PERSONNEL SHALL HAVE ACCESS TO THE MANHOLE AT ALL TIMES OF THE DAY OR NIGHT.
3. NOT ALL INSTALLATIONS WILL REQUIRE THE ALUMINUM PLATFORMS. SAMPLER AND FLOW METERING APPARATUS TO BE PROVIDED BY THE INDUSTRIAL USER. FINAL DECISIONS RELATIVE TO THE REQUIREMENT FOR MONITORING EQUIPMENT AND THE SPECIFIC TYPE OF FLUME WILL BE MADE BY THE PRETREATMENT SECTION, WATER QUALITY DIVISION FOR EACH INDIVIDUAL CASE.
4. A PARSHALL FLUME OR PALMER BOWLUS FLUME SHALL BE FURNISHED AND INSTALLED IN ACCORDANCE WITH THIS DETAIL. THE FLUME MUST BE SIZED TO ACCURATELY MEASURE ALL ANTICIPATED FLOW LEVELS. PRIOR TO INSTALLATION THE FLUME SIZE, AND TYPE MUST BE APPROVED BY THE PRETREATMENT SECTION, WATER QUALITY DIVISION.
5. IN ORDER TO CONTROL VELOCITIES AT A LEVEL THAT ALLOWS FOR ACCURATE FLOW MEASUREMENT, SLOPES ON THE INLET SEWER LINES FOR 20 FT. OUTSIDE THE MANHOLE MUST BE AS SPECIFIED IN TABLE 1 FOR THE VARIOUS SIZE LINES. OUTLET SEWER LINES MUST BE DESIGNED TO CONVEY THE MAXIMUM DESIGN FLOWS WITHOUT CREATING A SURCHARGE CONDITION IN THE FLUME.

CONSTRUCTION NOTES

A. ALL MANHOLE BASES, RISER SECTIONS AND FLAT SLAB TOP SECTIONS SHALL BE PRECAST REINFORCED CONCRETE IN ACCORDANCE WITH CITY SPECIFICATIONS.

B. FRAME & COVER FOR NON-TRAFFIC AREAS SHALL BE NEENAH R-6661-VIH OR EQ. FOR TRAFFIC OR PARKING AREAS, IT SHALL BE NEENAH R-6663-0H OR EQUAL.

C. CONCRETE PIPE SUPPORTS SHALL EXTEND OUTSIDE THE MANHOLE TO BELL OF FIRST JOINT AND SHALL CRADLE PIPE TO THE SPRING LINE.

D. PREFABRICATED MONITORING FLUME TO BE INSTALLED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS AND SHALL BE MANUFACTURED BY MANNING. PLASTI-FAB OR APPROVED EQUAL. A PARSHALL FLUME OR A PALMER BOWLUS FLUME SHALL BE INSTALLED AS DIRECTED BY THE PRETREATMENT SECTION, WATER QUALITY CONTROL DIVISION.

E. CONCRETE FILLETS, USE 3000 PSI CONC. WITH TYPE II CEMENT. FILLETS TO MATCH TOP OF FLUME AND SLOPE ONE INCH FER FOOT.

F MANHOLE PIPE CONNECTIONS TO BE PER ASTM C-923; STANDARD SPEC. FOR RESILIENT CONNECTORS BETWEEN REINFORCED CONCRETE MANHOLE STRUCTURES AND PIPES. RESILIENT CONNECTORS TO BE A-LOK OR APPROVED EQUAL.

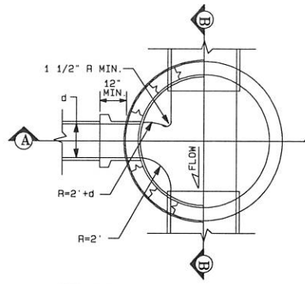
G. 6 IN. GROUT FILLET ON UPPER HALF OF PIPE AND AROUND BASE.

H 6" SUBGRADE AND BACKFILL COMPACTED TO 95% MODIFIED PROCTOR.

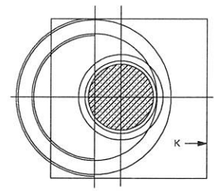
J. 2 IN. GRAVEL CRUSHED STONE LEVELING COURSE.

L. FLUME OUTLET END ADAPTER, PLASTI-FAB OR APPROVED EQUAL.

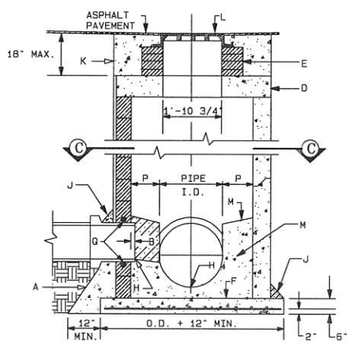
L. SLOPE PER TABLE 1.

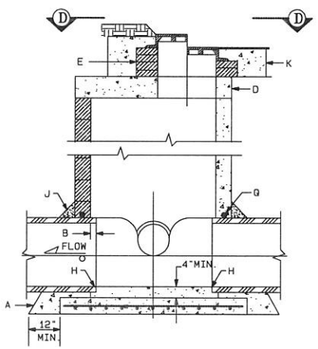


PLAN VIEW @ X-SECTION (C)(C)



PLAN VIEW @ X-SECTION (D)(D)





PROFILE VIEW @ X-SECTION (A)(A)

PROFILE VIEW @ X-SECTION (B)(B)

GENERAL NOTES

1. USE APPROVED MASTIC JOINT MATERIAL FOR ALL JOINTS.
2. CONTRACTOR HAS OPTION TO CONSTRUCT TYPE "C" M.H. IN LIEU OF TYPE "E" M.H. FOR DEPTHS OF 6' OR MORE.
3. DESIGN APPLIES TO 4', 6' & 8' MANHOLES.
4. M.H. GREATER THAN 18' IN DEPTH SHALL ONLY BE CONSTRUCTED OF PRECAST CONCRETE SECTION.
5. USE NON-SHRINK GROUT FOR FILLETS AND PENETRATIONS.
6. POSITION M.H. OPENING OVER THE UPSTREAM SIDE OF MAIN LINE.

CONSTRUCTION NOTES

A. CONCRETE PIPE SUPPORT SHALL EXTEND OUTSIDE OF M.H. TO BELL OF FIRST JOINT & SHALL CRADLE PIPE TO SPRING LINE. NOT APPLICABLE FLEXIBLE PIPE.
B. PIPE PENETRATION INTO MANHOLE SHALL BE FLUSH TO 2" MAX., MEASURED AT SPRING LINE OF PIPE.
D. PRECAST CONCRETE COVER
E. USE MAX. 4 COURSES GR. MS BRICK ON UNPAVED STREET FOR FUTURE ADJ. OF M.H. FRAME TO PAVEMENT GRADE. PLASTER INSIDE WITH 1/2" MORTAR.
F. CONCRETE BASE TO BE POURED IN PLACE USING NO. 4 BARS AT 6' O.C. EA. WAY FOR M.H. DEPTH OF 15' OR GREATER. NO 4 BARS AT 12" O.C. EA. WAY FOR M.H. LESS THAN 15' IN DEPTH.
H. INV. ELEV. OF STUB OR LATERAL AS SHOWN ON PLANS.
J. 6" GROUT FILLET ON UPPER HALF OF PIPE AND AROUND BASE.
K. USE A 5'x 5' CONCRETE PAD IN ALL AREAS SLOPE FOR GRADER USE UNPAVED AREAS.
L. FRAME AND COVER, SEE DWG. # SAS-4
M. CONCRETE FILL, 3000 PSI
N. SLOPE 1" PER FT. FROM PIPE CROWN
P. SHELF TO BE 9" WIDE MIN.
Q. APPROVED WATERSTOP TO BE COMPATIBLE WITH TYPE OF PIPE.

MANHOLE TYPE "C" DETAIL/DWG. # SAS-14

NOT TO SCALE

SHEET No.

5.0

CITY OF SANTA FE
WATER QUALITY DIVISION

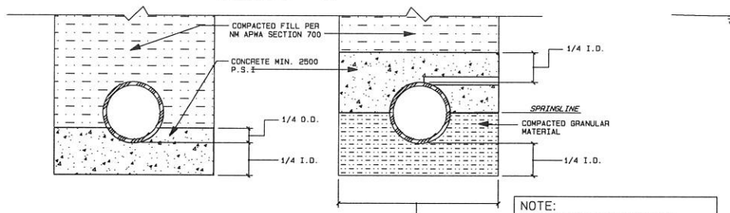
TITLE: SANITARY SEWER STANDARD CONSTRUCTION DETAILS

DATE: JULY 1992	REVISIONS	REF: SCDT4-4.dwg
DRAWN BY: G. CHAVEZ	1 8-4-92	
CADD RENDITION BY: G. CHAVEZ	2 12-10-92	SHEET 5.0
APPROVED BY: E. BROWN	3 11-16-94	

TRENCH BEDDING AND INSTALLATION DETAILS/DWG. # SAS-11

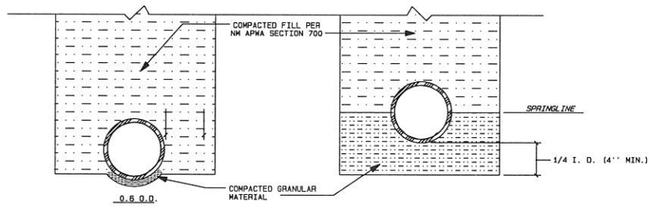
NOT TO SCALE

CLASS "A"



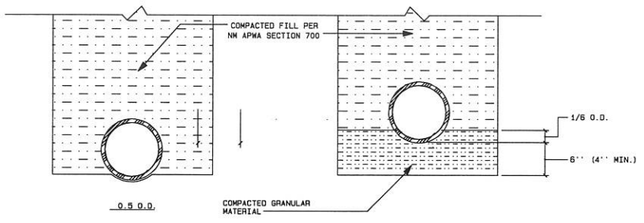
① CONCRETE CRADLE ② CONCRETE ARCH

CLASS "B"

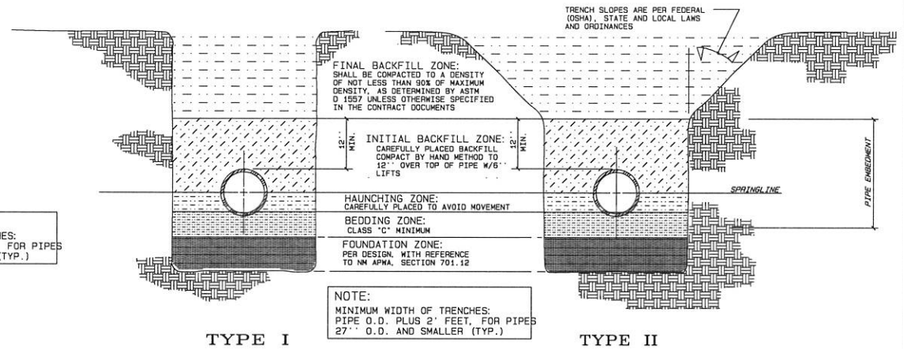


① SHAPED SUBGRADE WITH GRANULAR FOUNDATION ② GRANULAR FOUNDATION

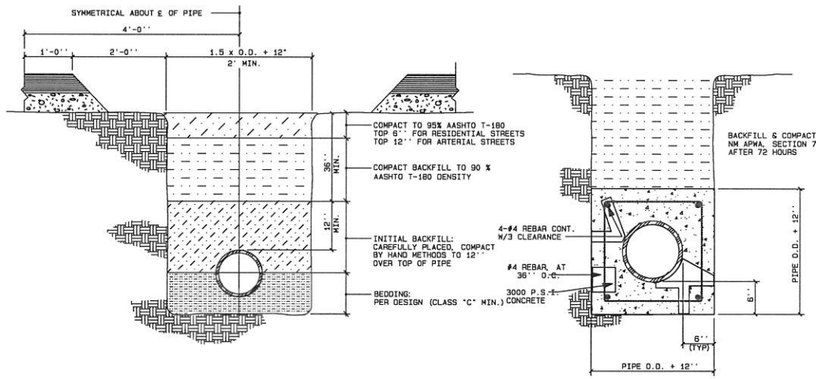
CLASS "C"



① SHAPED SUBGRADE ② GRANULAR FOUNDATION

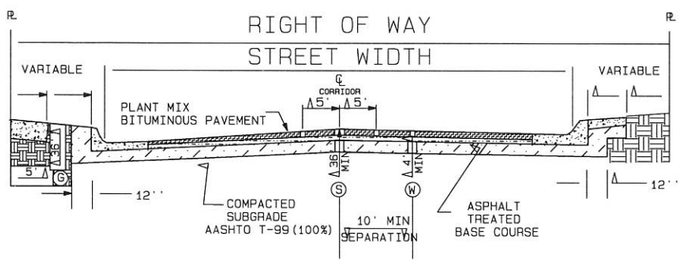


TYPE I TYPE II



PAVED AREAS CONCRETE ENCASEMENT

TYPICAL UTILITIES SEPARATION DETAIL/DWG. # SAS-12

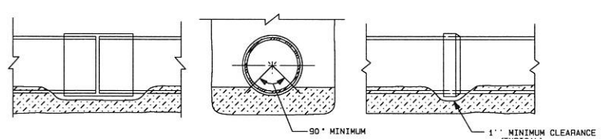


LEGEND

Ⓢ SEWER
Ⓓ GAS
Ⓦ WATER
℄ PROPERTY LINE
℄ CENTER LINE

NOT TO SCALE

BELL OR COUPLING INSTALLATION DETAIL/DWG. # SAS-13



NOT TO SCALE

GENERAL NOTES

CONSTRUCTION REQUIREMENTS

CR-1 MATERIALS AND WORK:
CURRENT NEW MEXICO STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (referred to as NM APWA) WITH MODIFICATIONS NOTED BY THE CITY OF SANTA FE.

CR-2 APPROVED PLANS:
USE PLANS BEARING THE OFFICIAL STAMP OF THE DESIGN ENGINEER AND BEARING THE APPROVAL SIGNATURE OF THE CITY WATER QUALITY DIVISION OR APPROVED REPRESENTATIVE. CONSTRUCTION PERFORMED WITHOUT APPROVED PLANS WILL BE REJECTED.

CR-3 SEWER HOOK-UP PERMIT:
OBTAIN PERMITS FOR THE PROJECT BEFORE COMMENCING ANY SEWER CONSTRUCTION. CONSTRUCTION PERFORMED WITHOUT OBTAINING PERMITS SHALL BE REJECTED.
A. CONSTRUCTION PLANS SHALL INDICATE THE CLASS OF BEDDING TO BE USED. CHANGE OF BEDDING MAY REQUIRE A CHANGE IN PIPE CLASSIFICATION OR WALL THICKNESS.

CR-4 SUBSTITUTIONS OR CHANGES:
ALL SUBSTITUTIONS OR CHANGES MUST BE APPROVED BY THE CITY WATER QUALITY DIVISION OR CITY APPROVED REPRESENTATIVE PRIOR TO CONSTRUCTION. ALL SUBSTITUTIONS OR CHANGES MUST BE SUBMITTED BY THE DESIGN ENGINEER TO THE CITY WATER QUALITY DIVISION OR APPROVED REPRESENTATIVE. WHERE APPROPRIATE, SUBMITTAL MUST INCLUDE FABRICATION DRAWINGS, WORKING DRAWINGS AND MATERIAL SPECIFICATIONS OR TEST DATA TO JUSTIFY SUBSTITUTIONS OR CHANGES. DESIGN ENGINEER SHALL AUTHORIZE ANY DRAWINGS FOR SUBSTITUTIONS AND CHANGES AND SUBMIT THEM TO THE CITY WATER QUALITY DIVISION FOR APPROVAL. UNAUTHORIZED SUBMITTALS WILL BE REJECTED.

CR-5 MANUFACTURER'S CERTIFICATES:
WHEN CERTIFICATES OF COMPLIANCE AND TEST REPORTS ARE REQUIRED FOR MATERIALS, DOCUMENTS SHALL BE SUBMITTED TO THE CITY WATER QUALITY DIVISION OR APPROVED REPRESENTATIVE AT THE TIME OF MATERIALS DELIVERY TO THE JOBSITE.

CR-6 CONTRACTOR REQUIREMENTS:
CONTRACTOR PERFORMING WORK ON PUBLIC SEWER LINES SHALL BE A LICENSED UTILITY CONTRACTOR.

INSTALLATION

I-1 LAYING PIPE:
AS PER SECTION 900, NM APWA; PIPE SHALL BE PLACED AND BEDDED IN A FROST FREE TRENCH; GASKET SHALL BE FULLY SEATED AND NOT SLIPPED; PIPE SHALL BE LAID THROUGH MANHOLE LOCATIONS ON STRAIGHT AND UP TO 22 1/2 DEGREE DEFLECTIONS.
A. IF PIPE TRENCH INSTALLATION CONFIGURATION EXCEEDS THE LIMITS OF NM APWA STANDARDS, SECTION 700, OR AS DEFINED ON THE CONSTRUCTION PLANS, THE DESIGN ENGINEER WILL SPECIFY THE NEW PIPE CLASSIFICATION OR WALL THICKNESS.
B. TYPE I TRENCH CONFIGURATION IS NORMALLY USED WHEN TRENCH DEPTHS ARE 8' (FT.) OR LESS. TYPE II TRENCH CONFIGURATION IS NORMALLY USED WHEN TRENCH DEPTHS ARE 9' (FT.) AND OVER, DEPENDING ON SOIL CONDITIONS. REFER TO NM APWA STANDARDS SECTION 700.

I-2 MANHOLE CONSTRUCTION:
A. BASE:
1. CAST IN PLACE: ON UNDISTURBED FROST FREE SUBGRADE
2. PRECAST UNIT: ON PEA GRAVEL WITH COMPLETE EVEN BEARING
B. PRECAST BARREL:
1. JOINTS: FILL COMPLETELY WITH NON-SHRINK GROUT AND TROWEL
2. MANHOLE ADAPTOR: INSTALL OVER PVC PIPE AND FILL IN PENETRATION WITH NON-SHRINK GROUT.
3. CAST IN PLACE BASES: SHALL ACHIEVE A MINIMUM OF 2500 PSI COMPRESSIVE STRENGTH BEFORE SETTING PRECAST BARREL SECTIONS.

I-3 EXCAVATION AND BACKFILL:
AS PER SECTION 700, NM APWA; SATURATION BY FLOODING OR JETTING METHODS IS NOT PERMITTED WITHOUT A SOILS ENGINEERING REPORT RECOMMENDING THESE METHODS. MECHANICAL OR VIBRATORY COMPACTORS SHALL NOT BE USED ON THE BEDDING AND 12" (IN.) OF INITIAL BACKFILL. COMPACTION SHALL BE DETERMINED PER AASHTO T-180.

CONSTRUCTION MATERIALS

CM-1 SEWER PIPE: (CERTIFICATES REQUIRED)
A. VITRIFIED CLAY: REFER TO SECTION 125, NM APWA FOR EXTRA STRENGTH VCP.
B. PLASTIC (PVC): REFER TO SECTION 121, NM APWA, AS MODIFIED BY THE CITY.
1. 4" THRU 15" (IN.) DIAMETER, ASTM D-3034 OR ASTM F-789 PIPE. MINIMUM PS-46 STRENGTH. SDR-35 OR EQUAL.
2. LARGER THAN 15" (IN.) DIAMETER: ASTM F 679 VOL. 08.04.
C. PVC RESTRAINED JOINTS: SERIES 1350 OR SERIES 1390 FOR COUPLINGS PRODUCED BY UNI-FLANGE CORPORATION. LOCKING COUPLINGS WITH NYLON SPLINE, MARKETED AS "YELLOWMINE" AND PRODUCED BY CERTAINTEED CORPORATION, OR APPROVED EQUAL.
D. MANHOLE ADAPTERS: ASBESTOS CEMENT (AC) MANHOLE ADAPTERS, OR AC/PVC ADAPTER COUPLINGS.
E. BUILDING SERVICE STUBS: CAST IRON DWV, PVC SCH. 40 DWV.
F. SERVICE CONNECTIONS:
1. VCP PIPE: FACTORY TEE FITTINGS; SECTION 125 NM APWA.
2. PVC PIPE: CAST IRON BODIES TAPPING SADDLE WITH STAINLESS STEEL TENSION STRAP AND FITTINGS; FOWLER "QUICKWAY", BENECO, HERSEY "PIONEER", OR APPROVED EQUAL.
G. SOIL CLASSIFICATION: THE UNIFIED SOIL CLASSIFICATION SYSTEM PER ASTM D 2487 TABLE 701.3.5 NM APWA.

CM-2 MANHOLES:
A. CONCRETE MANHOLES: PRECAST REINFORCED CONCRETE RISERS, REDUCING CONES, AND ADJUSTMENT RINGS PER ASTM C 478 VOL. 04.05. BASES MAY BE FIELD PLACED CONCRETE OR PRECAST CONCRETE PER ASTM C 478 VOL. 04.05 (CERTIFICATES REQUIRED). CRACKED OR VISIBLY DEFECTIVE UNITS WILL BE REJECTED.
B. PIPE PENETRATIONS: PRECAST UNITS SHALL HAVE SUITABLE SIZED OPENINGS CAST INTO BARREL AT PROPER ANGLES FOR PIPE AND MANHOLE ADAPTERS.
C. MANHOLE STEPS: REFER TO SECTION 920.4.7 NM APWA POLYPROPYLENE ENCASED GRADE 60 STEEL BY M.A. INC. OR APPROVED EQUAL; 14"(IN.) WIDE, 16"(IN.) MAXIMUM SPACING.
D. FRAMES AND COVERS:
1. CASTING: SHALL CONFORM TO SECTION 150, 151 & 152, NM, APWA CLASS 30B (CERTIFICATES AND SHOP DRAWINGS REQUIRED)
2. MINIMUM COVER WEIGHT: 165 POUNDS
3. MINIMUM COMBINED WEIGHT: 365 POUNDS +/- 5%
4. BEARING SURFACES: SHALL BE MATCHED FOR A FIRM NON ROCKING SEAT BETWEEN FRAME AND COVER. MINIMUM SEATING WIDTH: 7/8"(IN.)
5. COATING: NONE
6. COVER LETTERINGS: SANTA FE, N.M. SANITARY SEWER
7. CASTINGS: CAST MANUFACTURER AND MODEL NUMBER ON FRAME AND COVER.
8. CASTINGS TOLERANCE: +/- 1/16"(IN.) PER FOOT OF OVERALL DIMENSION. OUT OF ROUND CASTINGS AND LOOSE FITTING UNITS WILL BE REJECTED IN THE FIELD.

CM-3 CONCRETE ENCASEMENT:
A. REQUIREMENTS:
1. WHEN THE PIPE COVER IS 36" (IN.) OR LESS.
2. WHEN VITRIFIED CLAY CROSSES AN ARROYO.
3. WHEN A WATER LINE PASSES BELOW OR LESS THAN 18" (IN.) ABOVE THE EXISTING SEWER LINE.
4. WHEN A PARALLEL WATER LINE IS LESS THAN 10'(FT.) HORIZONTALLY AND LESS THAN 2'(FT.) ABOVE THE SEWER LINE.
5. THE SEWER LINE SHALL BE ENCASED IN CONCRETE 6"(IN.) THICK AS DETAILED, AND EXTEND AT LEAST 10'(FT.) ON EACH SIDE OF THE WATER LINE.

FIELD QUALITY CONTROL

FQC-1 TESTING AND INSPECTION:
A. SUPERVISION: CONDUCTED BY DESIGN ENGINEER.
B. CERTIFICATION: DESIGN ENGINEER SHALL CERTIFY THAT THE PROJECT HAS BEEN COMPLETED IN ACCORDANCE TO PLANS & SPECIFICATIONS AND SHALL SUBMIT A CERTIFICATION OF COMPLIANCE STATEMENT WITH STAMP AND SIGNATURE.
C. EQUIPMENT AND ASSISTANCE: PROVIDED BY CONTRACTOR.

FQC-2 LINE AND GRADE: ALLOWABLE TOLERANCE BETWEEN STRUCTURES FROM DESIGN:
A. LINE: 0.20 FOOT
B. GRADE: 0.02 FOOT; PIPE SHALL NOT HOLD BACK ANY WATER.

FQC-3 LEAKAGE TEST:
AIR TEST REQUIRED; REFER TO SECTION 901.7 NM APWA.

FQC-4 TELEVISION INSPECTION:
CONTRACTOR SHALL PROVIDE A CERTIFIED CCTV SEWERLINE INSPECTION AND RECORD TAPES AT HIS OWN EXPENSE.

FQC-5 ALL CONNECTIONS TO EXISTING MANHOLES INCLUDES REHABILITATING THE TIE IN MANHOLE TO MEET THESE STANDARD CONSTRUCTION DETAILS.

NOTE: REVISIONS TO THIS SHEET SHALL BE MADE UNDER THE AUTHORITY OF THE CITY OF SANTA FE ONLY.

SHEET No. **5.1**

WATER QUALITY DIVISION — UTILITY DEVELOPMENT

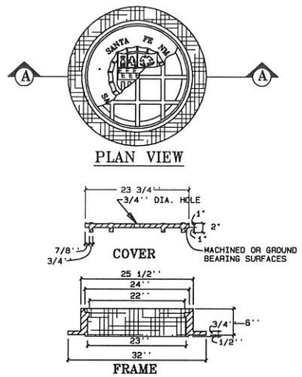
CITY OF SANTA FE
WATER QUALITY DIVISION

TITLE: SANITARY SEWER STANDARD CONSTRUCTION DETAILS

DATE: JULY 1992	REVISIONS		REF: SCDT3-4.dwg
DRAWN BY: G. CHAVEZ	1 8-4-92	4	
CADD RENDITION BY: G. CHAVEZ	2 12-10-92	5	SHEET 5.1
APPROVED BY: E. BROWN	3 11-16-94	6	

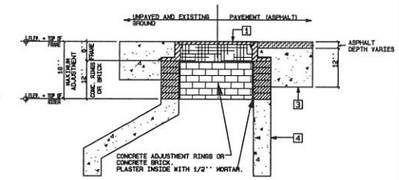
LEGEND

ITEM	DESCRIPTION
1	MANHOLE FRAME & COVER, refer to manhole frame and cover detail Dwg. No. SAS-4
2	CONCRETE ADJUSTMENT RINGS or CONCRETE BRICK, refer to concrete adjustment detail Dwg. No. SAS-5
3	CONCRETE COLLAR, refer to concrete collar detail Dwg. No. SAS-6
4	PRECAST REINFORCED CONCRETE RISER, CONE or FLAT TOP, with 5"(in) wall thickness, refer to general note CM-2
5	PRECAST REINFORCED CONCRETE BASE RISER, with suitable sized openings, refer to general note CM-2A
6	CONCRETE BASE, refer to concrete base detail Dwg. No. SAS-7
7	SEWER PIPE, refer to general note CM-1
8	6"(in) GROUT FILLET, on upper half of pipe and around base
9	ADAPTER, MANHOLE, refer to manhole adapter detail Dwg. No. SAS-8
10	PIPE PENETRATION INTO MANHOLE, refer to manhole adapter detail Dwg. No. SAS-8
11	PIPE SUPPORT, CONCRETE, shall extend out-side of manhole a maximum of 18"(in) to bell of first joint and shall cradle pipe half pipe
12	CONCRETE FILL, 3000 p.s.i., refer to general note CR-6
13	SHELF, to be 9"(in) minimum width with 1"(in) per 1'-0" slope, from crown of pipe
14	CUT UPPER HALF OF PIPE, after manhole has been completed and inspected by engineer
15	HAND FORMED CHANNELS, shall be on a uniform radius and shall not hold water
16	INVERT ELEVATIONS OF LATERAL LINES, shall be the same as the springline elevation of the sewer main, where possible
17	CHANGE SLOPE OF PIPE, at center of manhole
18	APPROVED WATER STOP, to be with type of pipe



PROFILE VIEW @ SECTION A-A

MANHOLE FRAME & COVER DETAIL/DWG # SAS-4 NOT TO SCALE



MANHOLE ADJUSTMENT DETAIL/DWG # SAS-5 NOT TO SCALE

GENERAL NOTES

CONSTRUCTION REQUIREMENTS

CR-1 MATERIALS AND WORK:
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CR-2 APPROVED PLANS:
USE PLANS BEARING THE OFFICIAL STAMP OF THE DESIGN ENGINEER AND BEARING THE APPROVAL SIGNATURE OF THE CITY WATER QUALITY DIVISION OR APPROVED REPRESENTATIVE. CONSTRUCTION PERFORMED WITHOUT APPROVED PLANS WILL BE REJECTED.

CR-3 SEWER HOOK-UP PERMIT:
OBTAIN PERMITS FOR THE PROJECT BEFORE COMMENCING ANY SEWER CONSTRUCTION. CONSTRUCTION PERFORMED WITHOUT OBTAINING PERMITS SHALL BE REJECTED.
A. CONSTRUCTION PLANS SHALL INDICATE THE CLASS OF BEDDING TO BE USED. CHANGE OF BEDDING MAY REQUIRE A CHANGE IN PIPE CLASSIFICATION OR WALL THICKNESS.

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ALL SUBSTITUTIONS OR CHANGES MUST BE APPROVED BY THE CITY WATER QUALITY DIVISION OR CITY APPROVED REPRESENTATIVE PRIOR TO CONSTRUCTION. ALL SUBSTITUTIONS OR CHANGES MUST BE SUBMITTED BY THE DESIGN ENGINEER TO THE CITY WATER QUALITY DIVISION OR APPROVED REPRESENTATIVE. WHERE APPROPRIATE, SUBMITTAL MUST INCLUDE FABRICATION DRAWINGS, WORKING DRAWINGS AND MATERIAL SPECIFICATIONS OR TEST DATA TO JUSTIFY SUBSTITUTIONS OR CHANGES. DESIGN ENGINEER SHALL AUTHORIZE ANY DRAWINGS FOR SUBSTITUTIONS AND CHANGES AND SUBMIT THEM TO THE CITY WATER QUALITY DIVISION FOR APPROVAL. UNAUTHORIZED SUBMITTALS WILL BE REJECTED.

CR-5 MANUFACTURER'S CERTIFICATES:
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CR-6 CONTRACTOR REQUIREMENTS:
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INSTALLATION

I-1 LAYING PIPE:
AS PER SECTION 900, NM APWA; PIPE SHALL BE PLACED AND BEDDED IN A FROST FREE TRENCH; GASKET SHALL BE FULLY SEATED AND NOT SLIPPED; PIPE SHALL BE LAID THROUGH MANHOLE LOCATIONS ON STRAIGHT AND UP TO 22 1/2 DEGREE DEFLECTIONS.
A. IF PIPE TRENCH INSTALLATION CONFIGURATION EXCEEDS THE LIMITS OF NM APWA STANDARDS, SECTION 700, OR AS DEFINED ON THE CONSTRUCTION PLANS, THE DESIGN ENGINEER WILL SPECIFY THE NEW PIPE CLASSIFICATION OR WALL THICKNESS.
B. TYPE I TRENCH CONFIGURATION IS NORMALLY USED WHEN TRENCH DEPTHS ARE 8'(FT.) OR LESS. TYPE II TRENCH CONFIGURATION IS NORMALLY USED WHEN TRENCH DEPTHS ARE 9'(FT.) AND OVER, DEPENDING ON SOIL CONDITIONS. REFER TO NM APWA STANDARDS SECTION 700.

I-2 MANHOLE CONSTRUCTION:
A. BASE:
1. CAST IN PLACE: ON UNDISTURBED FROST FREE SUBGRADE
2. PRECAST UNIT: ON PEA GRAVEL WITH COMPLETE EVEN BEARING
B. PRECAST BARREL:
1. JOINTS: FILL COMPLETELY WITH NON-SHRINK GROUT AND TROWEL.
2. MANHOLE ADAPTOR: INSTALL OVER PVC PIPE AND FILL IN PENETRATION WITH NON-SHRINK GROUT.
3. CAST IN PLACE BASES: SHALL ACHIEVE A MINIMUM OF 2500 PSI COMPRESSIVE STRENGTH BEFORE SETTING PRECAST BARREL SECTIONS.

I-3 EXCAVATION AND BACKFILL:
AS PER SECTION 700, NM APWA; SATURATION BY FLOODING OR JETTING METHODS IS NOT PERMITTED WITHOUT A SOILS ENGINEERING REPORT RECOMMENDING THESE METHODS. MECHANICAL OR VIBRATORY COMPACTORS SHALL NOT BE USED ON THE BEDDING AND 12"(IN.) OF INITIAL BACKFILL. COMPACTION SHALL BE DETERMINED PER AASHTO T-180.

CONSTRUCTION MATERIALS

CM-1 SEWER PIPE: (CERTIFICATES REQUIRED)
A. VITRIFIED CLAY: REFER TO SECTION 125, NM APWA FOR EXTRA STRENGTH VCP.
B. PLASTIC (PVC): REFER TO SECTION 121, NM APWA, AS MODIFIED BY THE CITY.
1. 4" THRU 15" (IN.) DIAMETER. ASTM D-3034 OR ASTM F-789 PIPE. MINIMUM PS-45 STRENGTH. SDR-35 OR EQUAL.
2. LARGER THAN 15" (IN.) DIAMETER: ASTM F 679 VOL. 08.04.
C. PVC RESTRAINED JOINTS: SERIES 1350 OR SERIES 1390 FOR COUPLINGS PRODUCED BY UNI-FLANGE CORPORATION, LOCKING COUPLINGS WITH NYLON SPLINE, MARKETED AS "YELLOWMINE" AND PRODUCED BY CERTAINTEED CORPORATION, OR APPROVED EQUAL.
D. MANHOLE ADAPTERS: ASBESTOS CEMENT (AC) MANHOLE ADAPTERS, OR AC/PVC ADAPTER COUPLINGS.
E. BUILDING SERVICE STUBS: CAST IRON DWV, PVC SCH. 40 DWV.
F. SERVICE CONNECTIONS:
1. VCP PIPE: FACTORY TEE FITTINGS; SECTION 125 NM APWA.
2. PVC PIPE: CAST IRON BODIES TAPPING SADDLE WITH STAINLESS STEEL TENSION STRAP AND FITTINGS; FOWLER "QUICKWAY", GENECO, HERSEY "PIONEER", OR APPROVED EQUAL.
G. SOIL CLASSIFICATION: THE UNIFIED SOIL CLASSIFICATION SYSTEM PER ASTM D 2487 TABLE 701.3.5 NM APWA.

CM-2 MANHOLES:
A. CONCRETE MANHOLES: PRECAST REINFORCED CONCRETE RISERS, REDUCING CONES, AND ADJUSTMENT RINGS PER ASTM C 478 VOL. 04.05. BASES MAY BE FIELD PLACED CONCRETE OR PRECAST CONCRETE PER ASTM C 478 VOL. 04.05 (CERTIFICATES REQUIRED). CRACKED OR VISIBLY DEFECTIVE UNITS WILL BE REJECTED.
B. PIPE PENETRATIONS: PRECAST UNITS SHALL HAVE SUITABLE SIZED OPENINGS CAST INTO BARREL AT PROPER ANGLES FOR PIPE AND MANHOLE ADAPTERS.
C. MANHOLE STEPS: REFER TO SECTION 920.4.7 NM APWA POLYPROPYLENE ENCASED GRADE 60 STEEL BY M.A. INC. OR APPROVED EQUAL; 14"(IN.) WIDE, 16"(IN.) MAXIMUM SPACING.
D. FRAMES AND COVERS:
1. CASTING: SHALL CONFORM TO SECTION 150, 151 & 152, NM, APWA CLASS 30B. (CERTIFICATES AND SHOP DRAWINGS REQUIRED)
2. MINIMUM COVER WEIGHT: 185 POUNDS
3. MINIMUM COMBINED WEIGHT: 365 POUNDS +/- 5%
4. BEARING SURFACES: SHALL BE MATCHED FOR A FIRM NON ROCKING SEAT BETWEEN FRAME AND COVER. MINIMUM SEATING WIDTH: 7/8"(IN.)
5. COATING: NONE
6. COVER LETTERINGS: SANTA FE, N.M. SANITARY SEWER
7. CASTINGS: CAST MANUFACTURER AND MODEL NUMBER ON FRAME AND COVER.
8. CASTINGS TOLERANCE: +/- 1/16"(IN.) PER FOOT OF OVERALL DIMENSION. OUT OF ROUND CASTINGS AND LOOSE FITTING UNITS WILL BE REJECTED IN THE FIELD.

CM-3 CONCRETE ENCASEMENT:
A. REQUIREMENTS:
1. WHEN THE PIPE COVER IS 36" (IN.) OR LESS.
2. WHEN VITRIFIED CLAY CROSSES AN ARROYO.
3. WHEN A WATER LINE PASSES BELOW OR LESS THAN 18" (IN.) ABOVE THE EXISTING SEWER LINE.
4. WHEN A PARALLEL WATER LINE IS LESS THAN 10'(FT.) HORIZONTALLY AND LESS THAN 2'(FT.) ABOVE THE SEWER LINE.
5. THE SEWER LINE SHALL BE ENCASED IN CONCRETE 6"(IN.) THICK AS DETAILED, AND EXTEND AT LEAST 10'(FT.) ON EACH SIDE OF THE WATER LINE.

FIELD QUALITY CONTROL

FQC-1 TESTING AND INSPECTION:
A. SUPERVISION: CONDUCTED BY DESIGN ENGINEER.
B. CERTIFICATION: DESIGN ENGINEER SHALL CERTIFY THAT THE PROJECT HAS BEEN COMPLETED IN ACCORDANCE TO PLANS & SPECIFICATIONS AND SHALL SUBMIT A CERTIFICATION OF COMPLIANCE STATEMENT WITH STAMP AND SIGNATURE.
C. EQUIPMENT AND ASSISTANCE: PROVIDED BY CONTRACTOR.

FQC-2 LINE AND GRADE: ALLOWABLE TOLERANCE BETWEEN STRUCTURES FROM DESIGN;
A. LINE: 0.20 FOOT
B. GRADE: 0.02 FOOT; PIPE SHALL NOT HOLD BACK ANY WATER.

FQC-3 LEAKAGE TEST:
AIR TEST REQUIRED; REFER TO SECTION 901.7 NM APWA.

FQC-4 TELEVISION INSPECTION:
CONTRACTOR SHALL PROVIDE A CERTIFIED CCTV SEWERLINE INSPECTION AND RECORD TAPES AT HIS OWN EXPENSE.

FQC-5 ALL CONNECTIONS TO EXISTING MANHOLES INCLUDES REHABILITATING THE TIE IN MANHOLE TO MEET THESE STANDARD CONSTRUCTION DETAILS.

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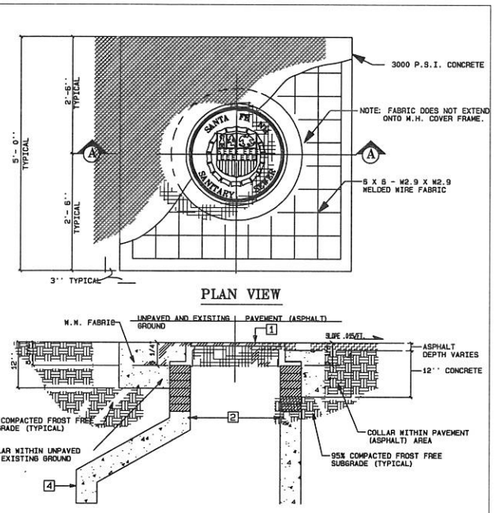
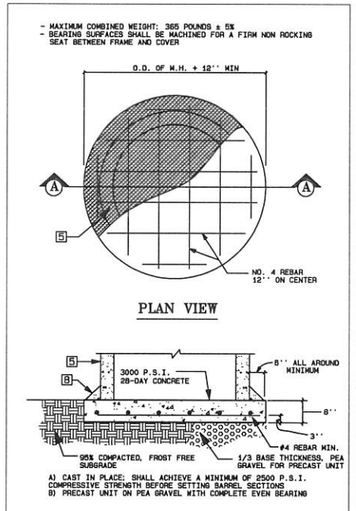
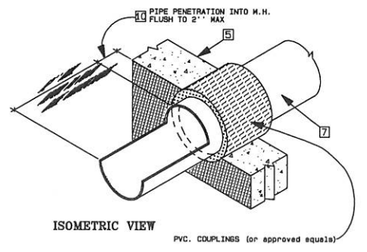


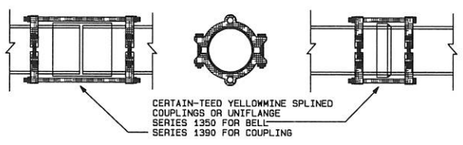
CONCRETE COLLAR DETAIL/DWG. # SAS-6 NOT TO SCALE



CONCRETE BASE DETAIL/DWG. # SAS-7 NOT TO SCALE

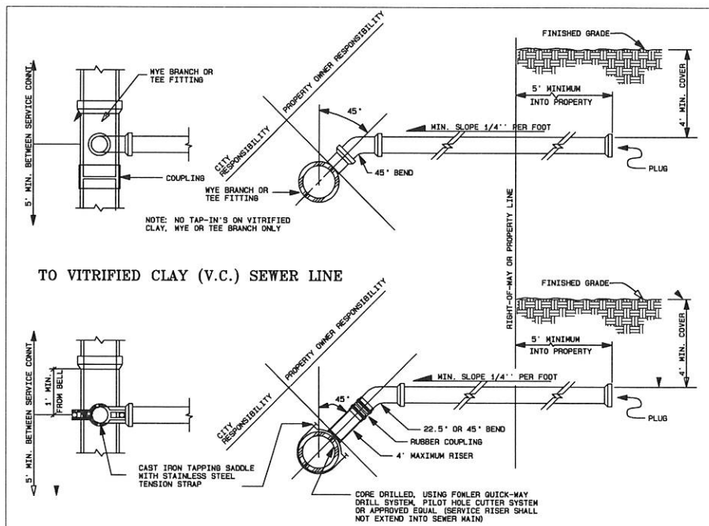


MANHOLE ADAPTER DETAIL/DWG. # SAS-8 NOT TO SCALE



NOTE: AT RIVER AND ARROYO CROSSINGS

RESTRAINED JOINT DETAIL/DWG. # SAS-9 NOT TO SCALE



SERVICE CONNECTION DETAILS/DWG.# SAS-10 NOT TO SCALE

SHEET No.
5.2

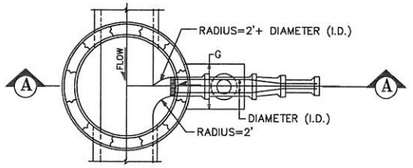
CITY OF SANTA FE
WATER QUALITY DIVISION

TITLE: SANITARY SEWER STANDARD CONSTRUCTION DETAILS

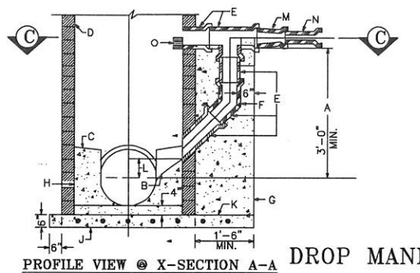
DATE: JULY 1992	REVISIONS	REF: SCDT2-4.DWG
DRAWN BY: G. CHAVEZ	1 8-3-92	
CADD RENDITION BY: G. CHAVEZ	2 12-10-92	
APPROVED BY: E. BROWN	3 11-16-94	SHEET 5.2

LEGEND

ITEM	DESCRIPTION
1	MANHOLE FRAME & COVER, refer to manhole frame and cover detail Dwg. No. SAS-4
2	CONCRETE ADJUSTMENT RINGS or CONCRETE BRICK, refer to concrete adjustment detail Dwg. No. SAS-5
3	CONCRETE COLLAR, refer to concrete collar detail Dwg. No. SAS-6
4	PRECAST REINFORCED CONCRETE RISER, CONE or FLAT TOP, with 5"(in) wall thickness, refer to general note CM-2
5	PRECAST REINFORCED CONCRETE BASE RISER, with suitable sized openings, refer to general note CM-2A
6	CONCRETE BASE, refer to concrete base detail Dwg. No. SAS-7
7	SEWER PIPE, refer to general note CM-1
8	6"(in) GROUT FILLET, on upper half of pipe and around base
9	ADAPTER, MANHOLE, refer to manhole adapter detail Dwg. No. SAS-8
10	PIPE PENETRATION INTO MANHOLE, refer to manhole adapter detail Dwg. No. SAS-8
11	PIPE SUPPORT, CONCRETE, shall extend out-side of manhole a maximum of 18"(in) to bell of first joint and shall cradle pipe half pipe
12	CONCRETE FILL, 3000 p.s.i., refer to general note CR-6
13	SHELF, to be 9"(in) minimum width with 1"(in) per 1'-0" slope, from crown of pipe
14	CUT UPPER HALF OF PIPE, after manhole has been completed and inspected by engineer
15	HAND FORMED CHANNELS, shall be on a uniform radius and shall not hold water
16	INVERT ELEVATIONS OF LATERAL LINES, shall be the same as the springline elevation of the sewer main, where possible
17	CHANGE SLOPE OF PIPE, at center of manhole
18	APPROVED WATER STOP, to be with type of pipe



PLAN VIEW @ X-SECTION C-C



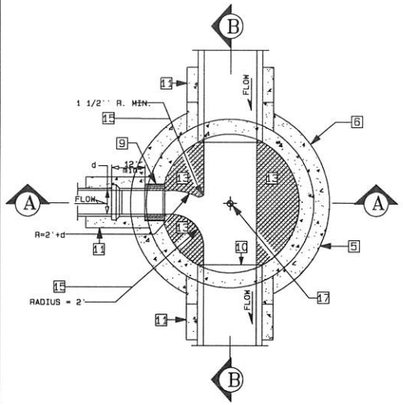
PROFILE VIEW @ X-SECTION A-A

CONSTRUCTION NOTES

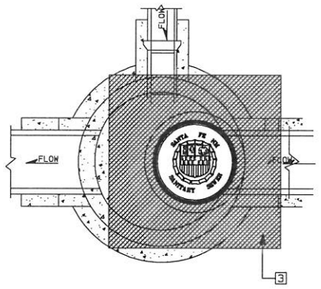
A. 3' (FT) MINIMUM DISTANCE OF VERTICAL DROP. LESS THAN 3' (FT) DISALLOWS DROP MANHOLE.
B. FORM PIPE INVERT IN SHELF. INVERT TO SPRINGLINE.
C. SHELF SLOPE, 1"(IN) PER FT.
D. MANHOLE TYPE FOR UPPER PORTION IS SPECIFIED IN MANHOLE TYPE "E" DETAIL DWG NO. SAS-2.
E. USE D.I. OR P.V.C.(SDR 35) PIPE THROUGHOUT DROP. ALL PIPING IN DROP STRUCTURE FROM THE TEE IS INCREASED ONE PIPE SIZE FROM THE SERVICE LINE. (SERVICE=8" DROP=10")
F. USE BELL AND SPIGOT 45° LONG RADIUS BEND.
G. CONCRETE SUPPORT WIDTH EQUALS PIPE O.D. PLUS 6"(IN) MINIMUM EACH SIDE.
H. CONCRETE FILL.
J. CAST IN PLACE REINFORCED CONCRETE BASE REQUIRED. CONCRETE BASE TO BE POURED IN PLACE USING NO.4 BARS AT 6"(IN) O.C. EACH WAY FOR MANHOLE DEPTH OF 16'(FT) OR GREATER. NO4 BARS AT 12"(IN) O.C. EACH WAY FOR MANHOLE DEPTH LESS THAN 16'(FT) IN DEPTH.
K. FOR NEW DROP ON EXISTING MANHOLE CONSTRUCT 3X3 REINFORCED CONCRETE BASE BEFORE CONSTRUCTING DROP SUPPORT.
L. MINIMUM 2"(IN) ABOVE SPRINGLINE OR AS SHOWN ON PLAN.
M. REDUCER
N. SERVICE LINE
O. EXTEND PIPE 3"(IN) MINIMUM 6"(IN) MAXIMUM INTO MANHOLE TOP. 1/2 PIPE REMOVED.

DROP MANHOLE DETAIL DWG.# SAS-1

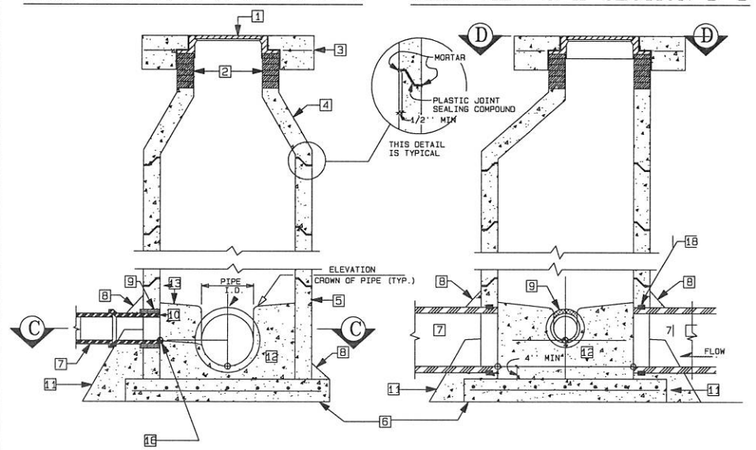
NOT TO SCALE



PLAN VIEW @ X-SECTION C-C



PLAN VIEW @ X-SECTION D-D



PROFILE VIEW @ X-SECTION A-A

PROFILE VIEW @ X-SECTION B-B

DENOTES ELEVATION PER ENGINEERS DESIGN

MANHOLE TYPE "E" DETAIL DWG.# SAS-2

NOT TO SCALE

GENERAL NOTES

CONSTRUCTION REQUIREMENTS

CR-1 MATERIALS AND WORK:
CURRENT NEW MEXICO STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (referred to as NM APWA) WITH MODIFICATIONS NOTED BY THE CITY OF SANTA FE.

CR-2 APPROVED PLANS:
USE PLANS BEARING THE OFFICIAL STAMP OF THE DESIGN ENGINEER AND BEARING THE APPROVAL SIGNATURE OF THE CITY WATER QUALITY DIVISION OR APPROVED REPRESENTATIVE. CONSTRUCTION PERFORMED WITHOUT APPROVED PLANS WILL BE REJECTED.

CR-3 SEWER HOOK-UP PERMIT:
OBTAIN PERMITS FOR THE PROJECT BEFORE COMMENCING ANY SEWER CONSTRUCTION. CONSTRUCTION PERFORMED WITHOUT OBTAINING PERMITS SHALL BE REJECTED.
A. CONSTRUCTION PLANS SHALL INDICATE THE CLASS OF BEDDING TO BE USED. CHANGE OF BEDDING MAY REQUIRE A CHANGE IN PIPE CLASSIFICATION OR WALL THICKNESS.

CR-4 SUBSTITUTIONS OR CHANGES:
ALL SUBSTITUTIONS OR CHANGES MUST BE APPROVED BY THE CITY WATER QUALITY DIVISION OR CITY APPROVED REPRESENTATIVE PRIOR TO CONSTRUCTION. ALL SUBSTITUTIONS OR CHANGES MUST BE SUBMITTED BY THE DESIGN ENGINEER TO THE CITY WATER QUALITY DIVISION OR APPROVED REPRESENTATIVE. WHERE APPROPRIATE, SUBMITTAL MUST INCLUDE FABRICATION DRAWINGS, WORKING DRAWINGS AND MATERIAL SPECIFICATIONS OR TEST DATA TO JUSTIFY SUBSTITUTIONS OR CHANGES. DESIGN ENGINEER SHALL AUTHORIZE ANY DRAWINGS FOR SUBSTITUTIONS AND CHANGES AND SUBMIT THEM TO THE CITY WATER QUALITY DIVISION FOR APPROVAL. UNAUTHORIZED SUBMITTALS WILL BE REJECTED.

CR-5 MANUFACTURER'S CERTIFICATES:
WHEN CERTIFICATES OF COMPLIANCE AND TEST REPORTS ARE REQUIRED FOR MATERIALS, DOCUMENTS SHALL BE SUBMITTED TO THE CITY WATER QUALITY DIVISION OR APPROVED REPRESENTATIVE AT THE TIME OF MATERIALS DELIVERY TO THE JOBSITE.

CR-6 CONTRACTOR REQUIREMENTS:
CONTRACTOR PERFORMING WORK ON PUBLIC SEWER LINES SHALL BE A LICENSED UTILITY CONTRACTOR.

INSTALLATION

I-1 LAYING PIPE:
AS PER SECTION 900, NM APWA; PIPE SHALL BE PLACED AND BEDDED IN A FROST FREE TRENCH; GASKET SHALL BE FULLY SEATED AND NOT SLIPPED; PIPE SHALL BE LAID THROUGH MANHOLE LOCATIONS ON STRAIGHT AND UP TO 22 1/2 DEGREE DEFLECTIONS.
A. IF PIPE TRENCH INSTALLATION CONFIGURATION EXCEEDS THE LIMITS OF NM APWA STANDARDS, SECTION 700, OR AS DEFINED ON THE CONSTRUCTION PLANS, THE DESIGN ENGINEER WILL SPECIFY THE NEW PIPE CLASSIFICATION OR WALL THICKNESS.
B. TYPE I TRENCH CONFIGURATION IS NORMALLY USED WHEN TRENCH DEPTHS ARE 8' (FT.) OR LESS. TYPE II TRENCH CONFIGURATION IS NORMALLY USED WHEN TRENCH DEPTHS ARE 9' (FT.) AND OVER, DEPENDING ON SOIL CONDITIONS. REFER TO NM APWA STANDARDS SECTION 700.

I-2 MANHOLE CONSTRUCTION:
A. BASE:
1. CAST IN PLACE: ON UNDISTURBED FROST FREE SUBGRADE
2. PRECAST UNIT: ON PEA GRAVEL WITH COMPLETE EVEN BEARING
B. PRECAST BARREL:
1. JOINTS: FILL COMPLETELY WITH NON-SHRINK GROUT AND TROWEL
2. MANHOLE ADAPTOR: INSTALL OVER PVC PIPE AND FILL IN PENETRATION WITH NON-SHRINK GROUT.
3. CAST IN PLACE BASES: SHALL ACHIEVE A MINIMUM OF 2500 PSI COMPRESSIVE STRENGTH BEFORE SETTING PRECAST BARREL SECTIONS.

I-3 EXCAVATION AND BACKFILL:
AS PER SECTION 700, NM APWA; SATURATION BY FLOODING OR JETTING METHODS IS NOT PERMITTED WITHOUT A SOILS ENGINEERING REPORT RECOMMENDING THESE METHODS. MECHANICAL OR VIBRATORY COMPACTORS SHALL NOT BE USED ON THE BEDDING AND 12"(IN.) OF INITIAL BACKFILL. COMPACTION SHALL BE DETERMINED PER AASHTO T-180.

CONSTRUCTION MATERIALS

CM-1 SEWER PIPE: (CERTIFICATES REQUIRED)
A. VITRIFIED CLAY: REFER TO SECTION 125, NM APWA FOR EXTRA STRENGTH VCP.
B. PLASTIC (PVC): REFER TO SECTION 121, NM APWA, AS MODIFIED BY THE CITY.
1. 4" THRU 15" (IN.) DIAMETER, ASTM D-3034 OR ASTM F-789 PIPE. MINIMUM PS-46 STRENGTH. SDR-35 OR EQUAL.
2. LARGER THAN 15" (IN.) DIAMETER: ASTM F 679 VOL. 08.04.
C. PVC RESTRAINED JOINTS: SERIES 1350 OR SERIES 1390 FOR COUPLINGS PRODUCED BY UNI-FLANGE CORPORATION, LOCKING COUPLINGS WITH NYLON SPLINE, MARKETED AS "YELLOWNE" AND PRODUCED BY CERTAINTEED CORPORATION, OR APPROVED EQUAL.
D. MANHOLE ADAPTERS: ASBESTOS CEMENT (AC) MANHOLE ADAPTERS, OR AC/PVC ADAPTER COUPLINGS.
E. BUILDING SERVICE STUBS: CAST IRON DWV, PVC SCH. 40 DWV.
F. SERVICE CONNECTIONS:
1. VCP PIPE: FACTORY TEE FITTINGS; SECTION 125 NM APWA
2. PVC PIPE: CAST IRON BODIES TAPPING SADDLE WITH STAINLESS STEEL TENSION STRAP AND FITTINGS; FOWLER "QUICKWAY"; GENECO, HERSEY "PIONEER", OR APPROVED EQUAL.
G. SOIL CLASSIFICATION: THE UNIFIED SOIL CLASSIFICATION SYSTEM PER ASTM D 2487 TABLE 701.3.5 NM APWA.

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A. CONCRETE MANHOLES: PRECAST REINFORCED CONCRETE RISERS, REDUCING CONES, AND ADJUSTMENT RINGS PER ASTM C 478 VOL. 04.05. BASES MAY BE FIELD PLACED CONCRETE OR PRECAST CONCRETE PER ASTM C 478 VOL. 04.05 (CERTIFICATES REQUIRED). CRACKED OR VISIBLY DEFECTIVE UNITS WILL BE REJECTED.
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2. MINIMUM COVER WEIGHT: 165 POUNDS
3. MINIMUM COMBINED WEIGHT: 365 POUNDS +/- 5%
4. BEARING SURFACES: SHALL BE MATCHED FOR A FIRM NON ROCKING SEAT BETWEEN FRAME AND COVER. MINIMUM SEATING WIDTH: 7/8"(IN.)
5. COATING: NONE
6. COVER LETTERINGS: SANTA FE, N.M. SANITARY SEWER
7. CASTINGS: CAST MANUFACTURER AND MODEL NUMBER ON FRAME AND COVER.
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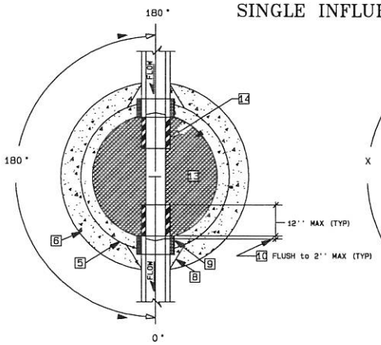
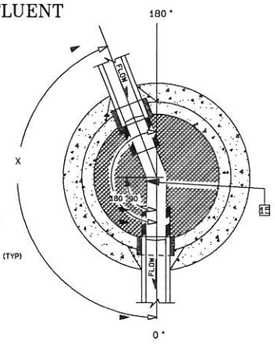
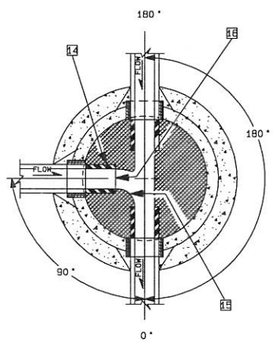
SINGLE INFLUENT



180° or STRAIGHT THROUGH

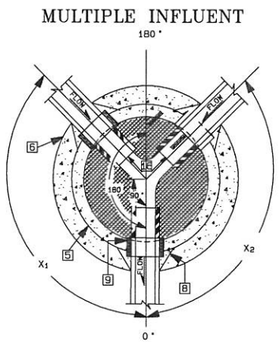


DIRECTIONAL CHANGE
X > 90°
ANGLE X MEASURED FROM EFFLUENT CENTERLINE

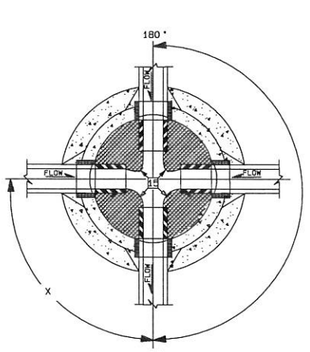


TEE, 90° & 180°
ANGLE MEASURED FROM EFFLUENT CENTERLINE

MULTIPLE INFLUENT



WYE
MINIMUM BEND 90°
MAXIMUM BEND 180°
ANGLE X MEASURED FROM EFFLUENT CENTERLINE



4-WAY TEE
ANGLE X MEASURED FROM EFFLUENT CENTERLINE
MINIMUM BEND 90°

PLAN VIEW OF MANHOLE BASE CONNECTION DWG.# SAS-3

NOT TO SCALE

WATER QUALITY DIVISION
UTILITY DEVELOPMENT

SHEET No. 5.3

TITLE: SANITARY SEWER STANDARD CONSTRUCTION DETAILS

DATE: JULY 1992	REVISIONS	REF: SCDT1-4.dwg
DRAWN BY: G. CHAVEZ	1 8-3-92	
CADD RENDITION BY: G. CHAVEZ	2 12-10-92	SHEET 5.3
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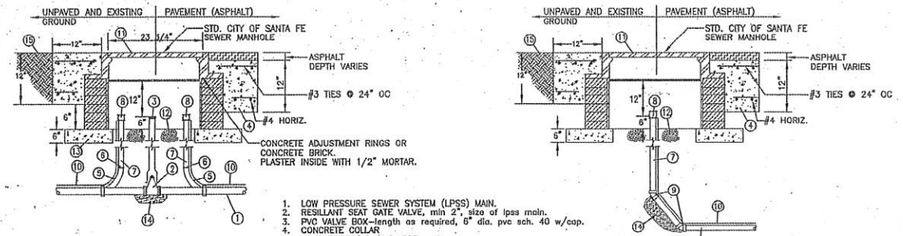
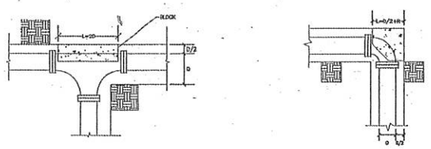


1. LOW PRESSURE SEWER SYSTEM (LPSS) MAIN.
2. RESILIANT SEAT GATE VALVE, min 2", size of lpss main.
3. PVC VALVE BOX–length as required, 6" dia. pvc sch. 40 w/cap.
4. CONCRETE COLLAR
5. LONG SWEEP–size of LPSS main.
6. REDUCER–2" x size of LPSS main.
7. 2" RISER
8. 2"–200 PSI BRASS BALL VALVE
9. ELBOW–45° ±18° LONG
10. LOCATE WIRE – Min 24" length req'd above riser
11. COVER–SANTA FE STANDARD
12. GRAVEL BEDDING–for box support and surface water leaching, (6" thick).
13. CONCRETE PAD–if installed in traffic area, concrete should be used in place of gravel bedding.
14. CONCRETE THRUST BLOCK
15. FINISHED GRADE

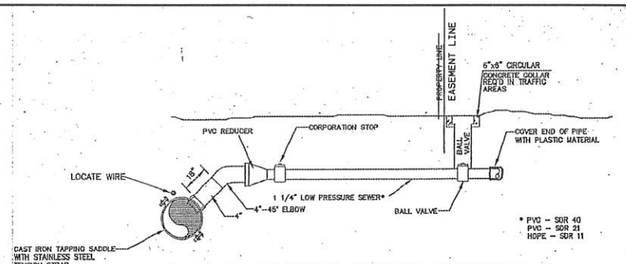
LOW PRESSURE SANITARY SEWER FLUSHING CONNECTIONS

NOT TO SCALE



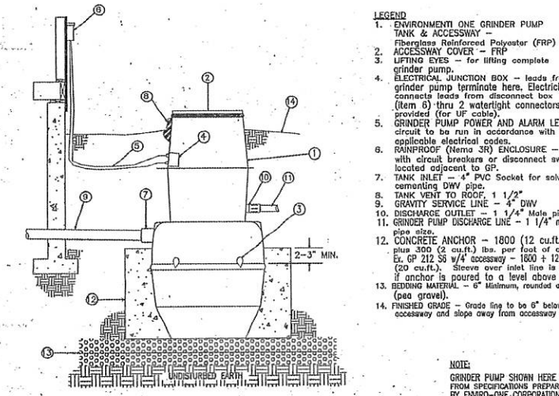
LOW PRESSURE SANITARY SEWER THRUST BLOCKING DETAIL

NOT TO SCALE



LOW PRESSURE SEWER SERVICE CONNECTION TO A GRAVITY MAIN

NOT TO SCALE



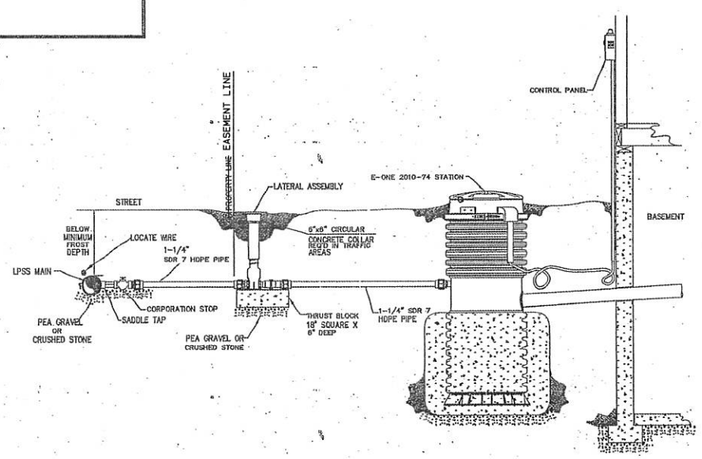
LEGEND

1. ENVIRONMENT ONE GRINDER PUMP TANK & ACCESSWAY – Fiberglass Reinforced Polyester (FRP)
2. ACCESSWAY COVER – FRP
3. LIFTING EYES – for lifting complete grinder pump.
4. ELECTRICAL JUNCTION BOX – leads from grinder pump terminate here. Electrician connects leads from disconnect box (item 8) thru 2 watertight connectors provided (for UF cable).
5. GRINDER PUMP POWER AND ALARM LEADS– circuit to be run in accordance with applicable electrical codes.
6. RAINPROOF (Nema 3R) ENCLOSURE – equipped with circuit breakers or disconnect switch, located adjacent to GP.
7. TANK INLET – 4" PVC Socket for solvent cementing DWV pipe.
8. TANK VENT TO ROOF, 1 1/2"
9. GRAVITY SERVICE LINE – 4" DWV
10. DISCHARGE OUTLET – 1 1/4" Male pipe thread.
11. GRINDER PUMP DISCHARGE LINE – 1 1/4" nominal pipe size.
12. CONCRETE ANCHOR – 1800 (12 cu.ft.) lbs. plus 300 (2 cu.ft.) lbs. per foot of accessway. Ex. GP 212 SS w/4' accessway – 1800 + 1200 = 3000 lbs. (20 cu.ft.). Sleeve over inlet line is required if anchor is poured to a level above the inlet.
13. BEDDING MATERIAL – 6" Minimum, rounded aggregate (pea gravel).
14. FINISHED GRADE – Grade ring to be 6" below top of accessway and slope away from accessway opening.

NOTE:
GRINDER PUMP SHOWN HERE IS FROM SPECIFICATIONS PREPARED BY ENVIRO-ONE CORPORATION. REFER TO MANUFACTURERS SPECIFICATION FOR INSTALLATION AND OPERATION INSTRUCTION.

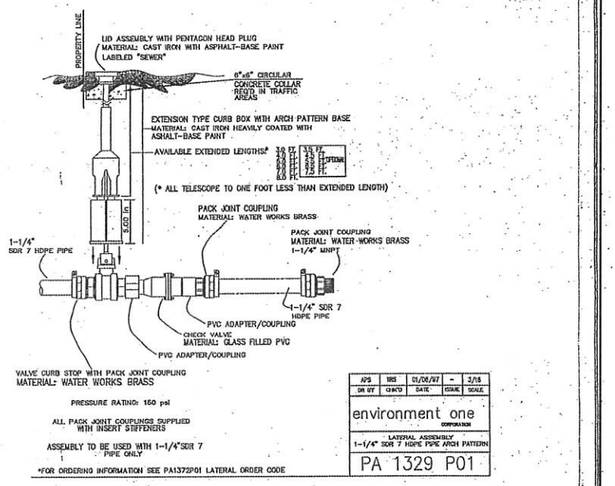
LOW PRESSURE SANITARY SEWER GRINDER PUMP DETAIL

NOT TO SCALE



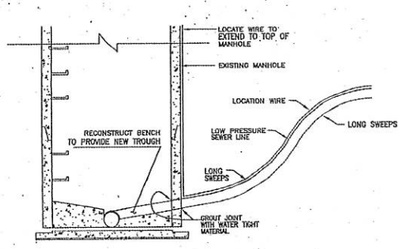
TYPICAL LATERAL INSTALLATION TO LOW PRESSURE MAIN

NOT TO SCALE



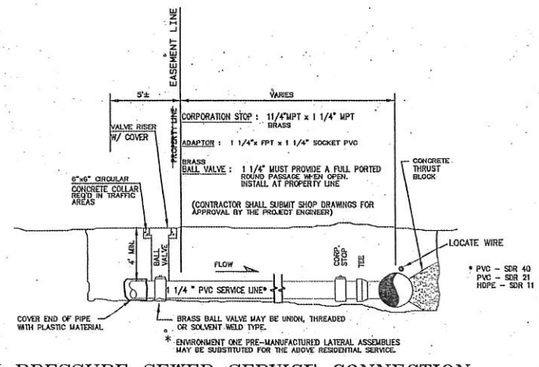
LATERAL ASSEMBLY 1–1/4" SDR 7 HDPE PIPE ARCH PATTERN

NOT TO SCALE



LOW PRESSURE SEWER MAIN CONNECTION TO GRAVITY SEWER MAIN MANHOLE

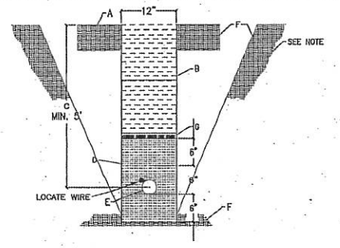
NOT TO SCALE



* ENVIRONMENT ONE PRE-MANUFACTURED LATERAL ASSEMBLIES MAY BE SUBSTITUTED FOR THE ABOVE RESIDENTIAL SERVICE.

LOW PRESSURE SEWER SERVICE CONNECTION TO A LOW PRESSURE SEWER MAIN

NOT TO SCALE



LEGEND

A. Existing grade
B. Backfill with excavated material unless selected material is ordered by engineer.
C. Specific depth as defined by engineer for installation site (freeze protection, etc...).
D. Backfill with select material in lifts as shown to 90% standard proctor density.
E. PVC sewer pipe
F. Undisturbed earth.
G. Wrap pipe with tape labeled sewer
H. Locate wires to be installed as per general notes into flushing connections, terminal flushing connections and manholes. Locate wire to be continuous insulated 12 gauge solid copper wire.

NOTE: All trenching shall meet OSHA requirements for ditch slopes.

LOW PRESSURE SANITARY SEWER TRENCH DETAIL

NOT TO SCALE

SHEET No.
5.4

CITY OF SANTA FE
WATER QUALITY DIVISION

TITLE: SANITARY SEWER STANDARD CONSTRUCTION DETAILS FOR LOW PRESSURE SEWER

DATE:	REVISIONS		FILE #
DRAWN BY:	△	△	
CADD RENDITION BY:	△	△	
APPROVED BY:	△	△	SHEET C5 OF C6